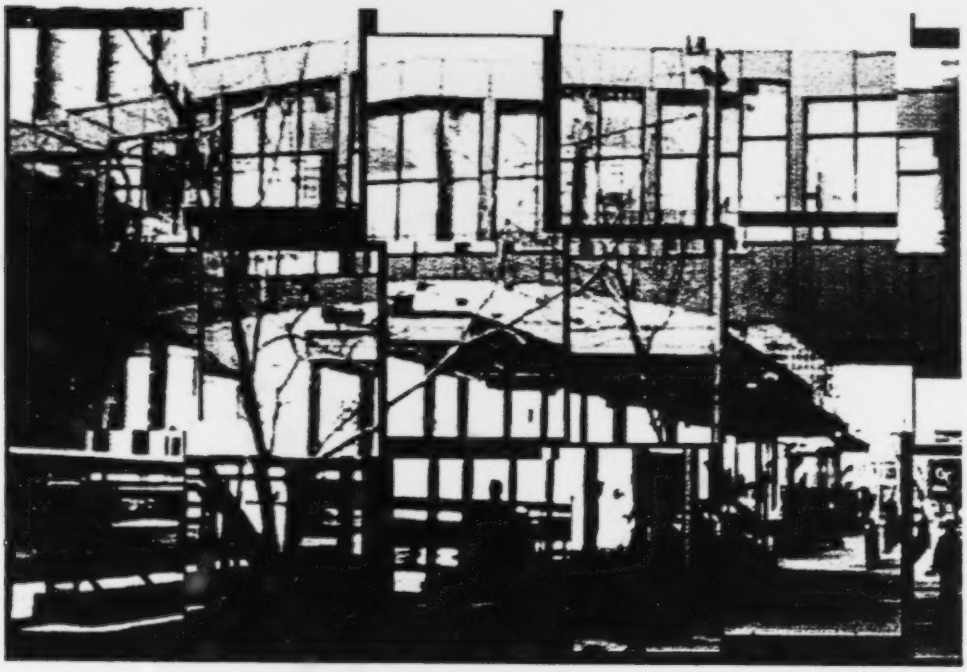

+15 User Survey

THE CITY
OF CALGARY
Planning and Building

PUBLISHING INFORMATION

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Part I:
INTRODUCTION, BACKGROUND & SURVEY METHODOLOGY

Introduction, Background & Methodology

The Study Purpose

In the 28 years since the first +15 bridge was built in downtown Calgary, the +15 system has grown to 11 kilometers of pedestrian walkways and bridges spanning throughout the downtown. Since the downtown in now extensively served by the system, it seems opportune to review its progress and determine what aspects of it the general public like or dislike.

In 1998 July, interview surveys were conducted with 181 users of the +15 system and this report summarizes those interviews. The survey attempted to gather general information about +15 users and their patterns of use. Identifying any predominant user groups, why people use the system, how frequently they use it, and what people like and don't like about using it are all important elements of increasing the understanding of the role of the +15 system in downtown Calgary. A main purpose of this study is to ask +15 users about their perceptions of the system and their personal experiences or concerns while using it. Many of the concerns addressed in the survey arose from prior research and audits of the +15 system[1]. Some building owners and managers have also identified issues that may negatively influence the effectiveness of the system as a desirable alternative to pedestrian travel on the sidewalk. In particular, concerns over the legibility of the system, or whether people can find their way through the system easily, and concerns over real or perceived threats to personal safety have been identified as potentially serious issues on the +15 system. The surveys asked +15 users to share their perceptions on these issues.

This study explores how users feel about the system and identifies issues and concerns that may be researched more thoroughly in more comprehensive studies in the future. The findings will however guide decisions about the system that need to be made in the interim.

16Km
54 bridges on 2 May 00

[1] City of Calgary (1998). BOMA +15 Security Survey Report. (Unpublished).
City of Calgary (1998). Audit of +15 System. (Unpublished).
City of Calgary (1988). +15 Pedestrian Count and User Survey.

Organization of Report

The report is divided into the following three parts: **Part I** is the introduction, background and methodology; **Part II** details the survey results; **Part III** is a discussion of the findings that relates the findings to each other, compares the findings with existing theory, and provides a conclusion and suggestions for future research.

Appendix A contains the survey instrument used during the interviews, and **Appendix B** provides the frequencies and percentages for each question.

Survey Funding

The survey was funded by The City of Calgary Planning and Building Department and the Calgary Downtown Association.

Background

Major Issue Identification

Definitions

Wayfinding refers to how people orient themselves and find their way through a space to a destination and how they use various environmental cues to decide in which direction they should proceed. Some cues may be obvious, as in the case of signage or directional indicators, but some may be more subtle, such as visible landmarks, artwork, displays or other physical features that help people orient and guide themselves. If people experience difficulty in wayfinding, their ability to navigate a space effectively is diminished and they may feel uncomfortable using the space or may avoid it altogether.

Personal Safety from harassment, harm, and criminal victimization is a pressing issue in many urban centres. Even in cities such as Calgary that enjoy a relatively low incidence of criminal activity, the perception of safety among people in the downtown is an important issue. People may feel afraid or unsafe independent of the actual risk of criminal victimization, and these perceptions of danger may cause people to alter their routines or avoid using some areas of the downtown at certain times. In this regard, safety is not only an issue related to actual crime, but is a quality of life issue for people who may feel afraid in the downtown.

Wayfinding

A recent audit of the +15 system raised concern over the legibility of much of its signage and wayfinding features. Since the +15 system passes through the interior of buildings and shopping malls, many of the major landmarks and other physical features that normally help people orient themselves in the downtown are not always visible. Consequently, greater importance is placed on interior wayfinding features, and there is concern that the existing signage may be outdated and hard to understand, making it difficult for people to navigate.

Research on the public perception of wayfinding on the +15 system and their opinions of the existing wayfinding measures will inform discussions about the potential need for a review of the existing signage or other wayfinding features.

Personal Safety

Concern for personal safety may exist without the actual threat of harm or victimization. Elements of the +15 system, such as poorly maintained parts, people loitering, or people using the +15 system inappropriately may all combine to create a general sense of fear among some users. This may result in people avoiding certain parts of the system or avoiding the system at certain times out of concern over their personal safety.

A recent Planning and Building Department survey of security personnel who patrol portions of the +15 system reveals that some sections have security issues that may make people feel unsafe. Though actual criminal victimizations were reportedly quite rare, panhandling, graffiti, and vandalism were identified as security concerns on the +15 system. These activities may contribute to the perception that the +15 system is unsafe, and may affect user patterns.

Main Hypotheses

At the outset of the research, several hypotheses were developed to clarify the issues and problems under study. As there is little research that addresses +15 issues from the perspective of the user, many of the hypotheses are based on observation and findings from other studies reported in the literature.

Main Hypothesis – ***The level of user comfort is directly related to perceived levels of safety and the ability of one to navigate the system effectively.***

Hypothesis 1 – People who routinely use the +15 system either live or work in the downtown. These people will feel more comfortable using the +15 system than those who do not live or work in the downtown.

Hypothesis 2 – Individuals who routinely use a particular section of the +15 system will feel more comfortable using that section than using unfamiliar sections of the system.

Hypothesis 3 – People who are familiar with, or routinely use, part or all of the system will feel safer and be able to navigate the system more effectively than those who do not use it routinely.

Hypothesis 4 – People who use the +15 system frequently rely more on landmarks and other physical elements than on signage to navigate the system.

Hypothesis 5 - Those who are dependent on existing signage and maps to navigate the system will find the system more difficult to use than those who are familiar with the system through routine usage.

Hypothesis 6 – The sections identified as most confusing and disorienting will be the sections that pass through retail areas, plazas, and the interior of buildings.

Survey Methodology

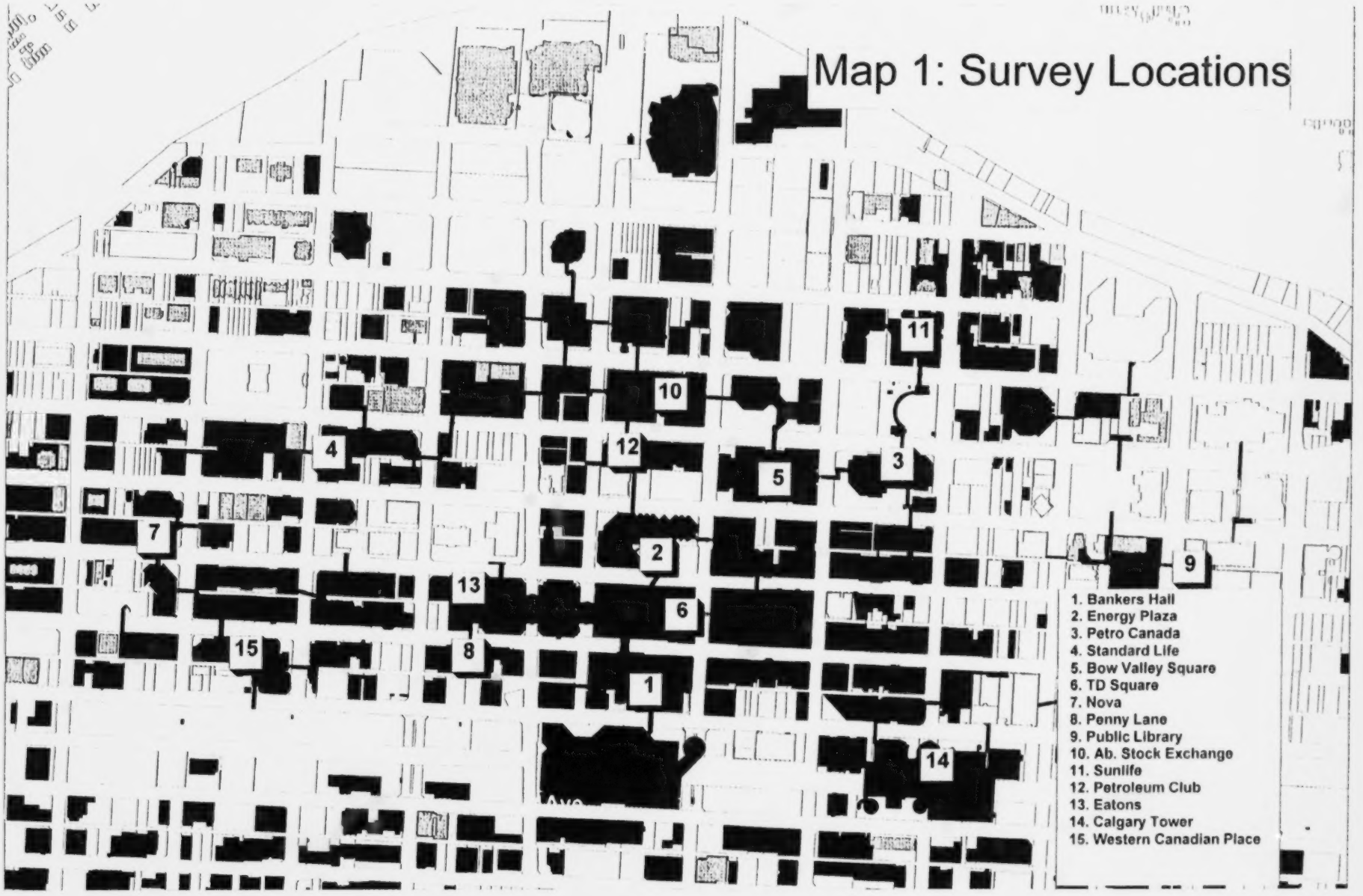
Data Gathering

Survey Locations

Three researchers at 16 different locations throughout the +15 system interviewed 181 randomly selected +15 users over 4 days in 1998 June. As indicated in Table 1.1, some of the interview locations yielded more completed surveys than others did. Some of the locations covered during the survey period did not have sufficient pedestrian flows to justify a surveyor's full shift. Because the interviewers were only available for four days, they were instructed not to stay at locations that were yielding few, if any, completed surveys. Consequently, more surveys were gathered at heavily traveled locations. Despite the low pedestrian flows in some areas, there is adequate geographic coverage of the +15 system (See Map 1).

Table 1.1: Survey Location Yields

Survey Location Code	Number of Surveys	Percent of Total
1. Bankers Hall	32	17.68%
2. Energy Plaza	25	13.81%
3. Petro Canada	21	11.60%
4. Standard Life	21	11.60%
5. Bow Valley Square	19	10.50%
6. TD Square	17	9.39%
7. Nova	13	7.18%
8. Penny Lane	10	5.52%
9. Public Library	5	2.76%
10. Alberta Stock Exchange	4	2.21%
12. Sunlife	4	2.21%
13. Petroleum Club	4	2.21%
14. Eatons	3	1.66%
15. Calgary Tower	2	1.10%
16. Western Canadian Place	1	0.55%
Totals	181	100%


Map 1: Survey Locations
1. Bankers Hall
2. Energy Plaza
3. Petro Canada
4. Standard Life
5. Bow Valley Square
6. TD Square
7. Nova
8. Penny Lane
9. Public Library
10. Ab. Stock Exchange
11. Sunlife
12. Petroleum Club
13. Eatons
14. Calgary Tower
15. Western Canadian Place

Survey Period

The surveys were administered over a three and one-half day period in July of 1998: on Tuesday July 14 (8:00 AM – 4:30 PM), Thursday July 16 (9:00 AM – 5:30 PM), Friday July 17 (9:30 – 6:00 PM), and Saturday July 18 (9:00AM – 1:00 PM). The survey dates were carefully selected in an attempt to gain a sample that is representative of +15 users. The decision to conduct surveys late on Friday and on Saturday was intended to gain samples from +15 users during off-peak periods. Additionally, the dates were selected to ensure that the sample was not biased by major events such as the Calgary Stampede that draw a disproportionate number of visitors to Calgary.

Availability of resources and other constraints necessitated that the study be carried out during the summer months. Though the +15 system is often thought of as a winter system, a recent Transportation Department pedestrian flow count shows that there is an approximate increase of 26% in winter pedestrian flows compared to summer pedestrian counts. Though the survey period may have precluded people who only use the +15 system during periods of inclement weather, the results suggest that attitudes and opinions of the sample group would not radically change during the winter.

Sampling Procedure

This study employed a systematic random sampling procedure in which every third person that passed the interviewer was approached for an interview. If the person declined to be interviewed, the refusal was recorded and the interviewer repeated the sampling procedure.

During the sampling period, 786 users of the +15 system were invited to participate in the survey. The 181 responses represent a success rate of slightly over 23%. The lower than anticipated response rate is likely a function of the characteristics of the predominant +15 user population as will be discussed in the following sections.

A Caveat: Presentation of Results

The structure of the survey was such that respondents were able to give multiple responses for the majority of questions. Many of the figures in this report are the frequency or percentage of respondents who gave a particular answer to the question. Because respondents could give more than one response, in many instances the frequencies and percentage representations will exceed the survey sample size (n=181) or 100%.

Part III uses cross-tabulation analysis to show how different variables relate to one another. When reading the cross-tabulation tables, the figures in each cell represent the frequency and percentage of respondents who meet on criteria on both the X and Y-axis.

Part II:
SURVEY RESULTS

Survey Results

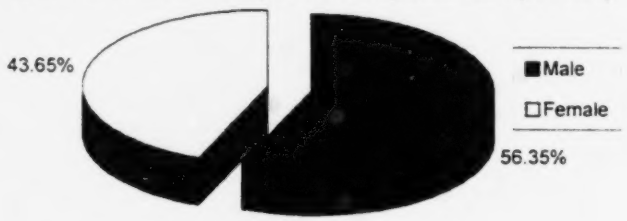
+15 User Characteristics

An objective of the research was to investigate who uses the system and whether or not there are any discernable user groups. An indication of who uses the system is an important precursor to understanding why and how people use the +15 system as well as understanding of any concerns they may have about wayfinding and personal safety.

Gender and Age

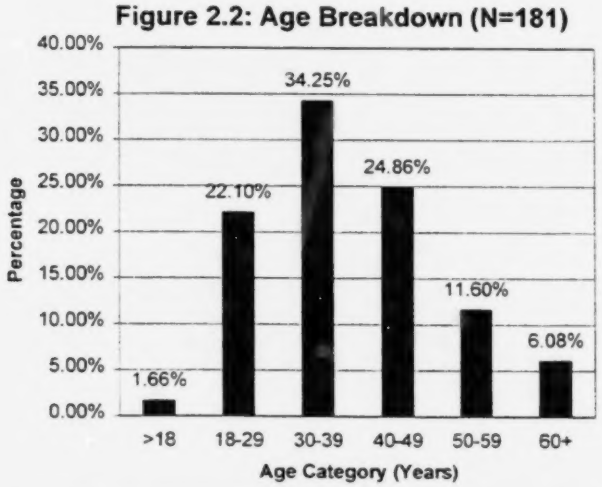
Of the 181 respondents who completed surveys, 56.35% (n=102) are male, and 43.65% (n=79) are female (See Figure 2.1). In the 1991 census, males made up 49.9% of the population of Calgary, but comprised 53.2% of the population in the downtown. In this regard, the gender split in this survey is similar to what may be expected in the downtown.

Figure 2.1: Gender Split of Respondents (N=181)



The majority of respondents (81.22% • n=147) are between the ages of 18 to 49 years, or what could be classified as "working age". Under 2% (n=3) of respondents were under the age of 18, and 17.67% (n=32) of respondents were over the age of 50 years. Figure 2.2 provides a breakdown of the age profiles of respondents.

Figure 2.2: Age Breakdown (N=181)



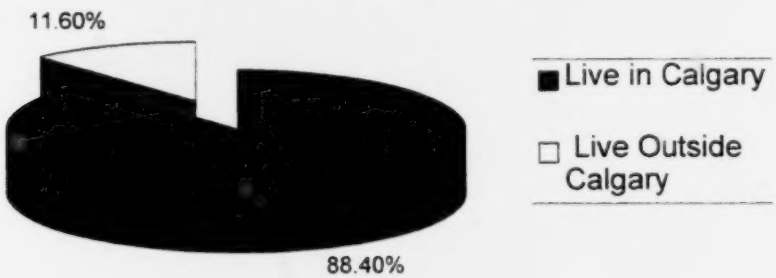
Residence Location

The analysis of where people live and work reveals that most respondents live in or near Calgary. Figure 2.3 compares the residential location of respondents who live within Calgary city limits to those who live outside of city limits. Of those who do not live in Calgary, the vast majority live within a one-hour commute to downtown. Only 3 respondents representing 1.66% could be classified as visitors to Calgary.

Although the majority of respondents live in Calgary, few reside in the downtown. Of the 160 respondents who live in Calgary, 24 respondents (15%) live in the downtown. However, this finding is significant given that approximately 1.4% of Calgary's population currently live in the downtown. Yet, the majority of survey respondents commute to the downtown via personal automobile (49.71% • n=90) or public transit (37.01% • n=67) from various points throughout greater Calgary and surrounding areas.

Most of the respondents who live in Calgary have been residents for a considerable period. Over 60% (n=112) of respondents have lived or worked in Calgary for more than 10 years.

Figure 2.3: Residence Location (N=181)

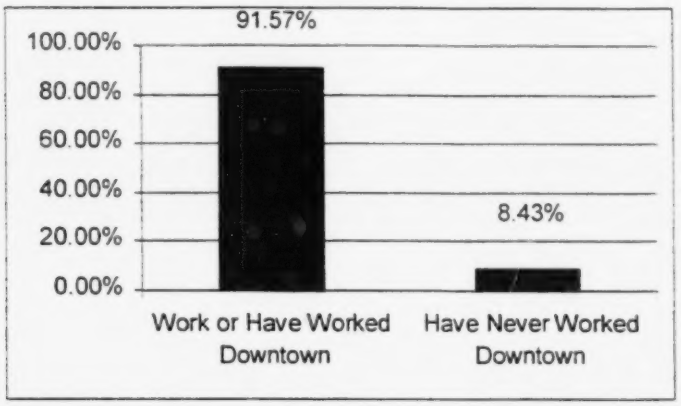


Employment Location

One of the more relevant findings of the survey is that most respondents work in the downtown. Excluding the visitors to Calgary, 85.39% (n=152) of respondents work in the downtown and a further 6.18% (n=11) are people who formerly worked in the downtown. Thus, over 91% (n=163) of respondents currently work or had previously worked in the downtown, compared to 8.43% (n=15) who did not report ever working in the downtown (See Figure 2.4).

The finding that a majority of the respondents are, or have been, employed in the downtown indicates that the +15 system is used as part of the daily routines of people who work in downtown buildings connected by the system. If people are using the +15 as part of their daily routines, respondents will likely be familiar with part or all of the system.

Figure 2.4: Employment Location



Patterns of Use

An important objective of this study is to understand why people use the system and the types of trips that they make. For example, if the +15 system is used for short trips between buildings rather than as a means to travel through the whole downtown, future decisions regarding expansion may be effected.

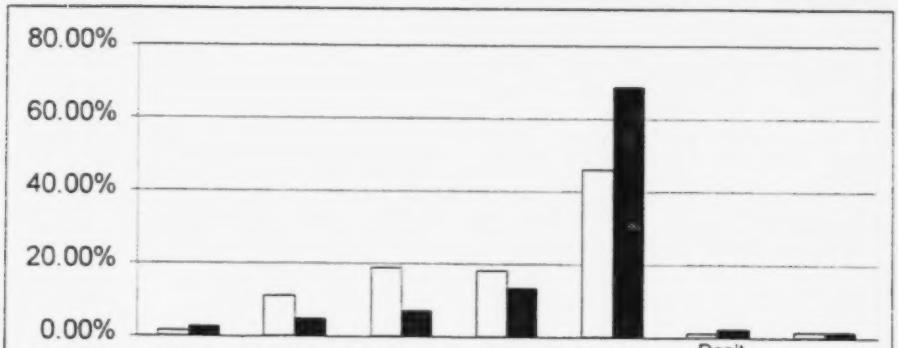
Additionally, hypothesis 3 posits that people who use the system on a regular basis may have different perceptions about wayfinding and safety issues than people who use the system rarely.

Frequency of Use

Respondents were asked how many days per week they use the +15 system in both winter and summer. Figure 2.5 displays the comparative results, which show moderate differences in the frequency of use between summer and winter, with respondents reporting that they use the system more in the winter.

The results are consistent with the recent Transportation Department pedestrian user count studies that show an increase of approximately 26% in winter over summer. In this survey, the percentage of people who use the +15 system 5 or more days per week increases from 45% to 74%, or an increase of 29% during winter.

Figure 2.5: Days per Week Used, Summer versus Winter (N=181)

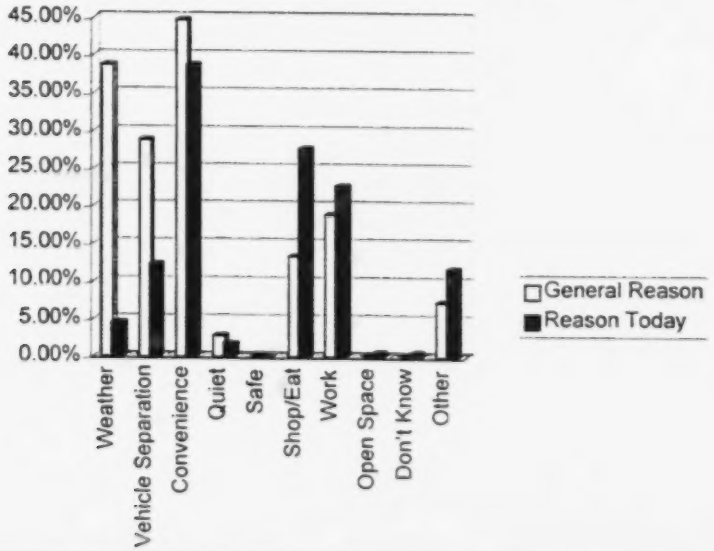


	Never	Occasional	1-2 Days	3-4 Days	5+ Days	Don't Know	Other
□ Summer	1.66%	11.05%	18.78%	18.23%	45.86%	1.10%	1.66%
■ Winter	2.76%	4.97%	7.18%	13.26%	68.51%	2.21%	1.66%

Reason for Using the +15 System

Respondents were asked why they use the +15 system in general and why they were using the +15 system on the day of the interview. As indicated in Figure 2.6, the three most frequently reported reasons among all 181 respondents for using the system generally are for "convenience" (44.7% • n=81), "weather protection" (38.67% • n=70), and for "work" related travel (18.78% • n=34). The three main reasons respondents (N=181) were using the +15 system on the day of the interviews were "convenience" (38.67% • n=70), to go "shopping" or for "food" (27.62% • n=50), and for "work" related travel (22.65% • n=41). Warm and sunny weather during the survey period may account for the different results concerning weather protection as a reason for using +15 on day of interview.

Figure 2.6: Reason for Using +15 System Generally versus Reason for Using on Day of Interview (N=181)



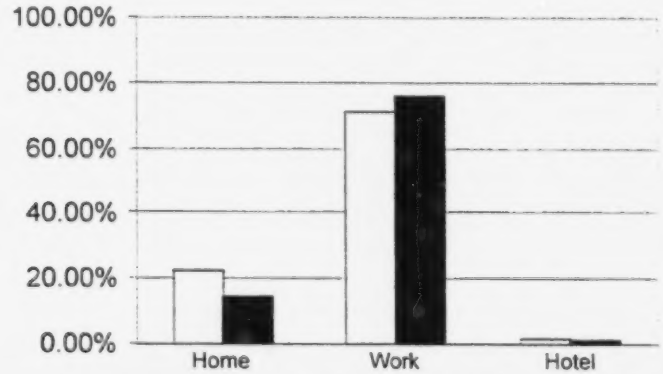
For many of the survey respondents, the +15 system represents an efficient and attractive alternative to pedestrian travel on the sidewalk. Convenience factored in as the main reason respondents use the +15 system, and 47.51% (n=86) of them stated that they prefer using the +15 system to using the sidewalk in the downtown. A further 25.41% (n=46) indicated they prefer the system if there is poor weather outside, with 9.39% (n=17) indicating that their preference for the system depends on where they are in the downtown. Only 16.57% (n=30) of respondents stated that they do not prefer using the +15 system to using the sidewalk.

Trip Patterns

For the trip origin and destination analysis, possible origins and destinations were divided into primary and secondary points. Primary points are home, workplace and hotel. The secondary origin and destination points are possible stops respondents may have made during their journey between primary points. These include stores, restaurants, parking lots and other services. This distinction was deemed necessary to ensure that information about the major origin and destination points could be gathered. Interviewers were instructed to prompt respondents if the initial responses consisted of secondary origin and destination points.

It appears that the majority of respondents use the +15 system for rather short routine journeys through the downtown. When asked where they were coming from and where they were going to, most respondents indicated that they were using the +15 as part of their workday routines. In Figure 2.7, most respondents report heading from work to work indicating that the +15 is heavily traveled for workday related trips in the downtown.

Figure 2.7: Primary Trip Origin and Destination Points (N=181)



	Home	Work	Hotel
□ Origin Point	22.10%	70.72%	1.66%
■ Destination Point	14.36%	76.24%	1.10%

The secondary locations most frequently mentioned are those that people may use as part of their daily workday. Coffee shops or food service locations account for 7.18% (n=13) of secondary origins and 8.29% (n=15) of secondary destinations. Retail stores and malls were reported as secondary origins and destinations by 8.84% (n=16) and 6.08% (n=11) of respondents respectively.

Over 79% (n=143) of all 181 respondents reported that the trip they were making when interviewed is a routine trip that they make more than once per week. This is compared to around 19% (n=35) who reported that they did not make the trip more than once per week.

Knowledge of the System

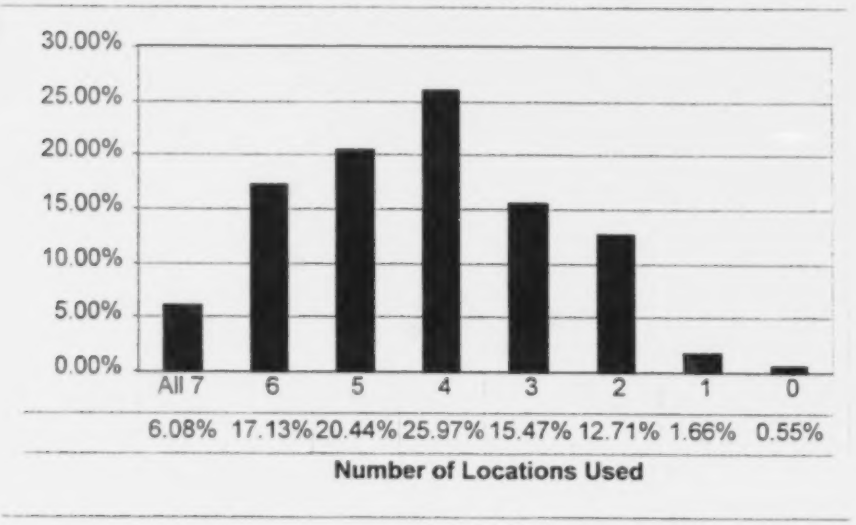
In an attempt to gauge how much of the system respondents use and whether they view the +15 as a cohesive system, respondents were asked whether or not they have used the +15 system at various locations in the downtown (Map 2). As shown in Table 2.2, the most highly used areas are in the centre of the downtown, particularly near retail malls. Bankers Hall and Bow Valley Square represent the areas with the highest reported usage. The areas with the lowest reported usage are those found on the periphery of the downtown and are locations with little retail or other attraction. Consequently, the central sections of the system are the ones that respondents will likely be most familiar with, while they may not be as familiar with the peripheral sections of the system.

Table 2.1: Have You Ever Used the +15 System in These Locations?

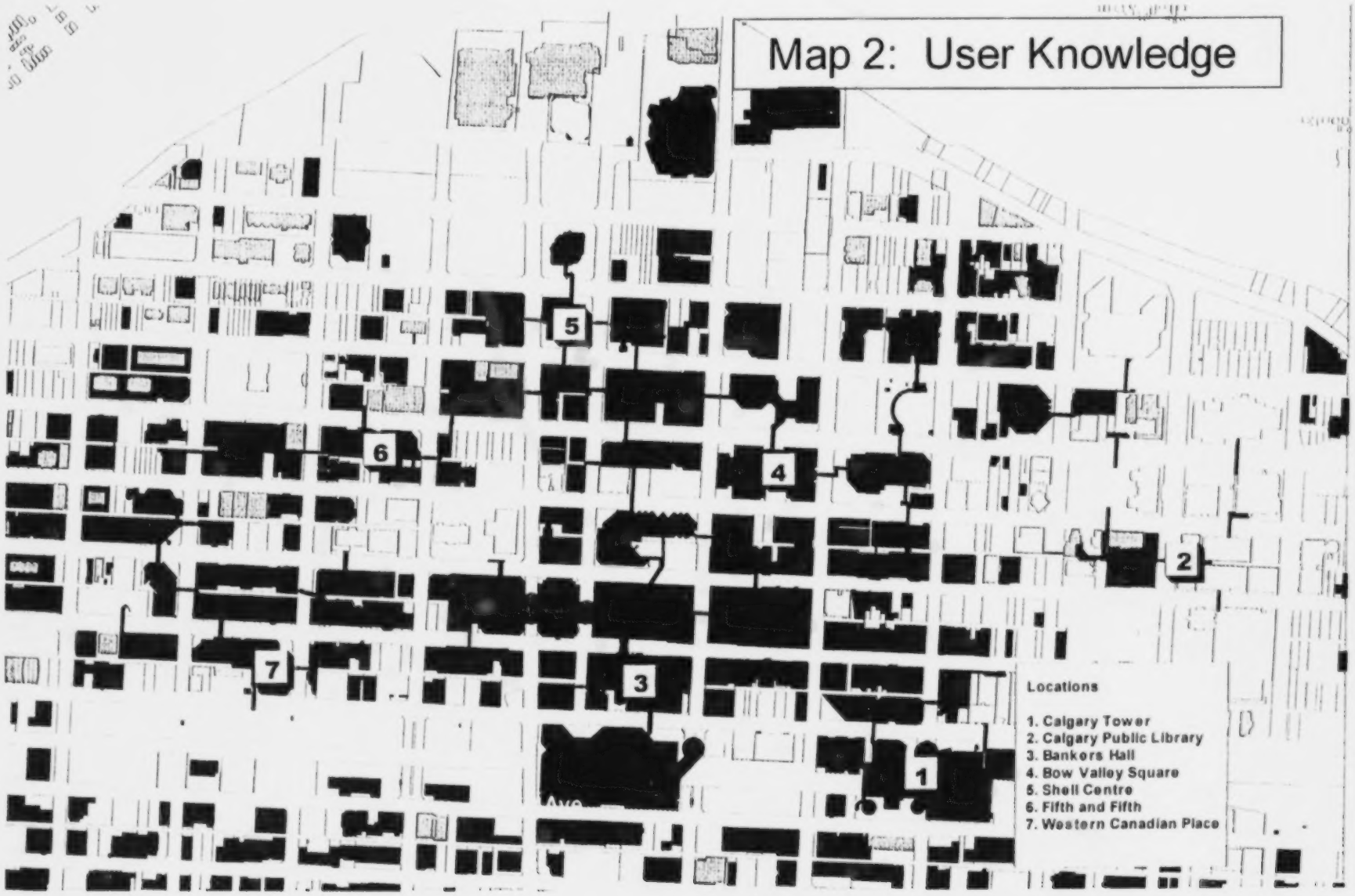
Location	Yes	No	Don't Know	Total
Calgary Tower	45.86%	54.14%	0%	100%
Calgary Public Library	30.39%	68.51%	1.10%	100%
Bankers Hall	93.37%	6.63%	0%	100%
Bow Valley Square	84.53%	14.92%	0.55%	100%
Shell Centre	55.80%	43.65%	.055%	100%
Fifth and Fifth	65.75%	32.60%	1.66%	100%
Western Canadian Place	50.28%	46.96%	2.76%	100%

Further analysis shows that the majority of respondents can recall having used an average of four of the seven locations listed above. As indicated in Figure 2.8, few of the respondents remember using the +15 system in all seven locations.

Figure 2.8: Number of Locations Used (N=181)



It must be cautioned however that many of the responses to the above analysis may be contingent on the location of the interview. The predominance of the retail malls as the parts of the +15 system that respondents recall having used may be a function of the large proportion of surveys gathered near these locations. However, the finding that the +15 locations near retail malls are the most heavily traveled may be indicative that most +15 users have used these sections of the system and are familiar with them.

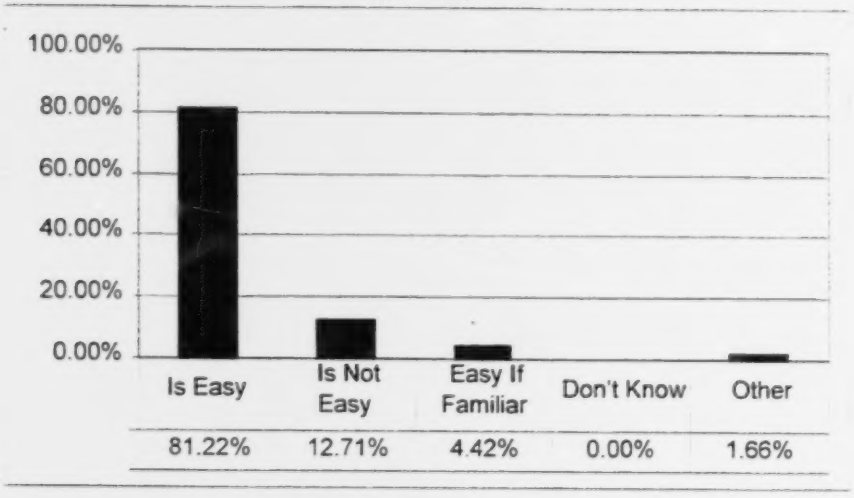

Map 2: User Knowledge
5
6
4
2
7
3
1
Locations
1. Calgary Tower
2. Calgary Public Library
3. Bankers Hall
4. Bow Valley Square
5. Shell Centre
6. Fifth and Fifth
7. Western Canadian Place

Wayfinding

Ease of Wayfinding

Respondents were asked if it is "easy" for them to find their way through the +15 system. As indicated in Figure 2.9, the majority of respondents report that it is "easy" for them to find their way through the +15 system.

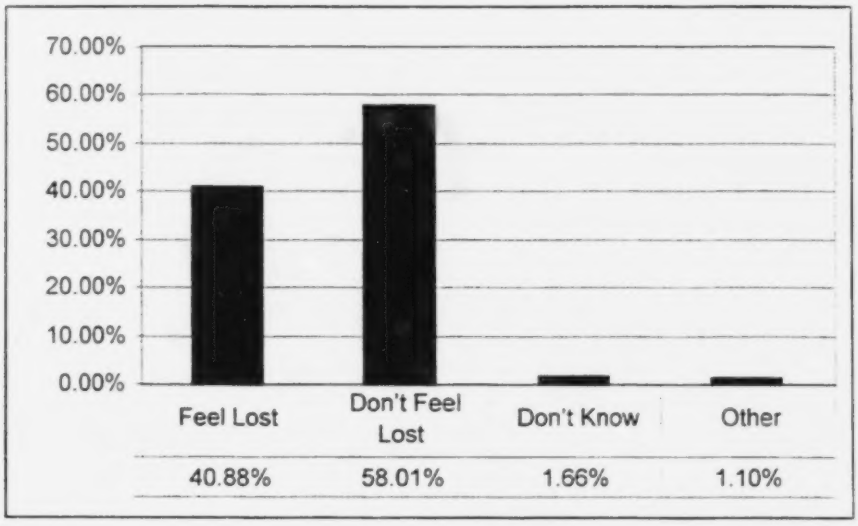
Figure 2.9: Is It Easy to Find Way Through System? (N=181)



Though only 12.71% (n=23) believe that the system is not easy to navigate, a slightly higher proportion of respondents report that they sometimes feel lost or disoriented while using the +15 system (Figure 2.10). However, of those who do report feeling lost or disoriented, 50% (n=37) report this as a "rare" occurrence, while a further 36.48% (n= 27) feel lost or disoriented "occasionally".

"Unfamiliarity" with certain sections of the +15 system factored as the primary reason why 55.40% (n=41) of the 74 respondents report feeling lost or disoriented. "Inadequate signage" and "confusing" parts of the system, were each reported by 33.78% (n=25). Respondents identified the "interior of buildings" as the primary areas where they tend to become disoriented or lost.

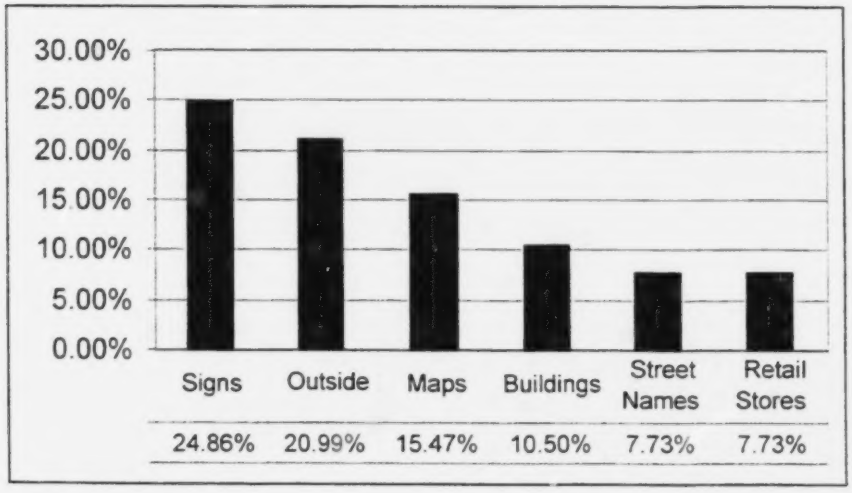
Figure 2.10: Do You Ever Feel Lost or Disoriented? (N=181)



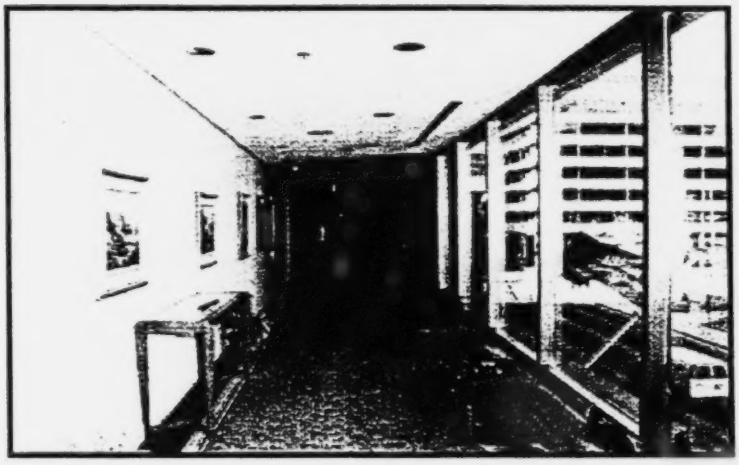
Physical Wayfinding Features

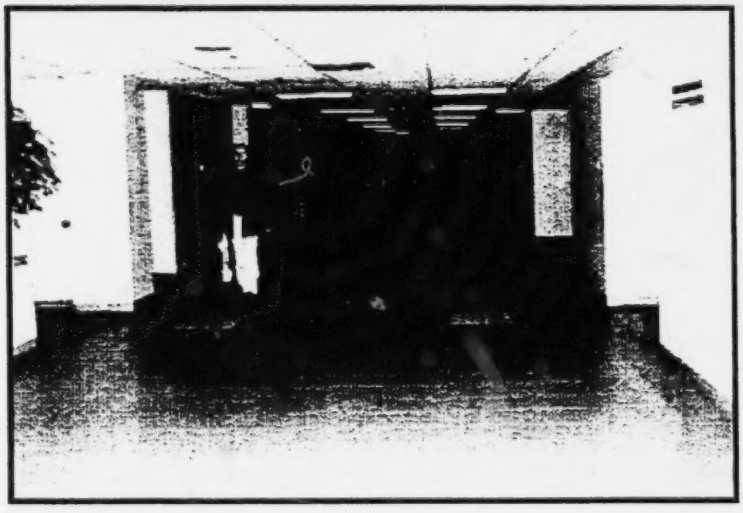
In an open-ended question, respondents were asked if they could give examples of any physical features that help them orient themselves or find their way while using the +15 system. Figure 2.11 displays the top five responses. Signage on the +15 system, the ability to see outside, map pedestals, certain buildings, street names and retail or service stores were the most common responses.

Figure 2.11: Physical Wayfinding Features (N=181)



Of particular interest is the orientation of the +15 system to the street as a means of wayfinding. In Figure 2.11, the second most common physical feature that people identified as useful in wayfinding is the ability to see outside. When asked directly whether the system is easier to navigate in sections where one can see the street outside, 87.29% (n=158) of respondents indicated that wayfinding is easier if they can see outside. This is compared to the 9.44% (n=18) who report that there is no benefit to being able to see outside.





Photos 1 & 2: Walkways With and Without Views Outside

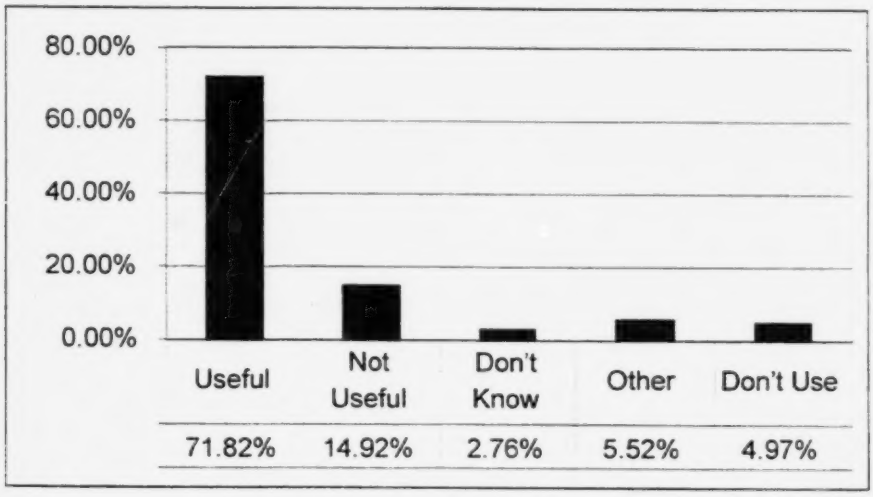
Signage and Maps

Signs were the primary physical feature respondents reported using to assist them in wayfinding. The results from the series of questions addressing signage on the +15 show that the respondents find the existing signage useful and do not have any serious problems or concerns relating to it.

Photo 3: Typical Map Pedestal

Over 71% (n=130) of respondents report that the existing signage is "useful" in helping them find their way (Figure 2.12). Most respondents also feel that the signs are easy to understand. The signs were reported to be "very easy" to understand by 49.17% (n=89) of respondents, "satisfactory" by a further 30.38% (n=55), and "hard" to understand by 9.94% (n=18) of the 181 respondents.

Figure 2.12: Are Existing Signs Useful?



When asked whether or not there are currently enough signs on the +15 system, nearly 60% (n=108) of respondents replied that there is "enough" signage compared to the 33% (n=60) who feel that there should be more signage.

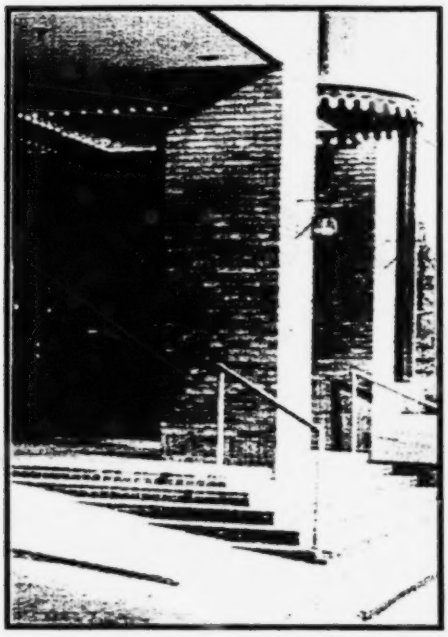
The usefulness of the sign is contingent on its style or design for the 53.04% (n=96) of respondents who report that some types of signage are more useful than others. "Building name" signs were identified as the most useful (39.58% • n=38), followed by "pedestal maps" (25% • n=24), "+15 blue circle" signs (19.79% • n=19), "directional" signage (15.63% • n=15), and "street name" signs (11.46% • n=11).

The pedestal maps located throughout the system are at least occasionally referred to by over 56% (n=102) of respondents. The opinions of respondents towards the map pedestals appear mixed. Over 52% (n=95) of respondents made positive remarks about the maps, and 37% (n=67) were negative with 24% (n=43) offering no opinion about the map pedestals. The most common positive comment about the maps is that they are generally "clear" (30.39% • n=55) and "helpful" (14.36% • n=26), while the negative comments were that the maps are "unclear" (16.57% • n=30) or "not helpful" (6.63% • n=12).

Legibility of Access Points

Respondents were encouraged to give their opinion of the access/exit points along the +15 system including both the street level accesses/exits and the those in the interior of buildings or malls. Though over 74% (n=134) of respondents have tried to access the +15 system from the street, when asked how they entered the system on the day of the interview, 65.19% (n=118) had accessed through office buildings and only 14.92% (n=27) accessed from the

street. This indicates that much of the travel for respondents originates in office buildings. Although issues with the legibility of access/exit points from the street have been identified in previous research and audits, it appears that the predominant user group does not use these street accesses frequently.



Photos 4 & 5: Street Entrances

The opinions expressed towards the access and exit points were nearly all positive. A total of 79.56% (n=144) of respondents believe that the access points are "fine" or "good". The second most common response was that the access points are "difficult to find", as reported by 7.18% (n=13) of all 181 respondents. In some instances where street access points are dark and dirty, a street-level survey might elicit different answers to this question. Future surveys should therefore consider this possibility.

To get an idea of how people gain access to the +15 system, respondents were asked what they would look for if they were on a street and looking for an access point. "Signs" were identified by 69.06% (n=125) as the primary feature they would use to find their way onto the system. "Bridges" (19.34% • n=35), "building entrances" (13.81% • n=25), and the "stairwells" (11.60% • n=21) are the other three most common responses.

Personal Safety

Many factors including the presence of panhandlers, intoxicated people, people sleeping, graffiti, and poor maintenance can influence the perception of personal safety. The presence of these 'incivilities' in an area can lead to a general perception that people are unsafe. Inadequate lighting, poor visibility, isolation, and the lack of available escape routes are all physical design characteristics that may make people to feel afraid or uncomfortable.

Photo 6: Evidence of People Sleeping and Maintenance Concerns On +15 Access Stairs

The most common response to perceived fear of harassment or criminal victimization is to avoid areas that do not feel safe. Although there appears to be a low incidence rate of criminal victimization on the +15 system, concern has been raised about many of the physical and social characteristics that may make people feel unsafe. To avoid raising alarm among respondents, the issue of personal safety was addressed through examination of behavioural patterns such as avoidance and general questions that address whether or not potentially fear inducing characteristics are perceived as problematic by +15 users.

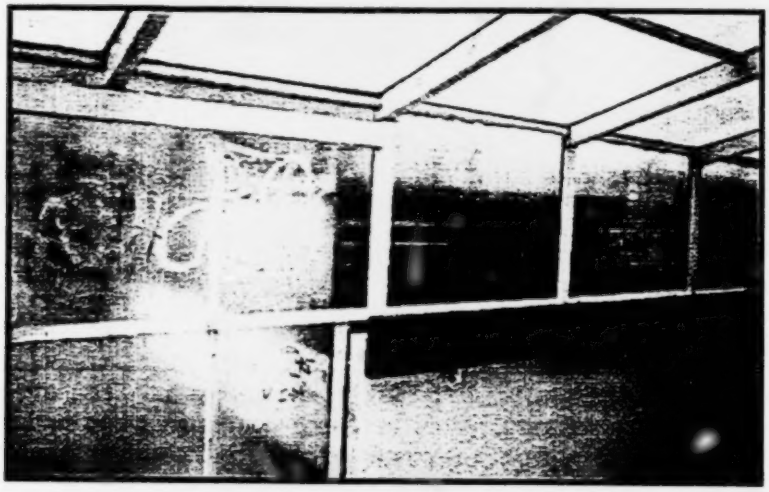


Photo 7: Graffiti and Maintenance Issues on +15 Walkway

General Perceptions of Safety

In questions asking what respondents "do not like" about using the +15 system, safety and safety related concerns did not figure prominently. The total of respondents who identified safety-related concerns as what they don't like about using the +15 system was 2.21% (n=4). This may indicate that safety is not a primary concern among +15 users interviewed in the study, although this may vary in a limited number of locations (See Figure 2.14).

When asked what improvements respondents would like to see made on the +15 system, increased "security" accounted for 1.66% (n=3) of all responses and the alleviation of "social concerns" such as panhandling and public intoxication a further 2.76% (n=5). In terms of physical design characteristics, an improvement to the "lighting" in the system was identified by 2.21% (n=4) of respondents as a possible improvement.

Perceptions of personal safety were not identified as a concern in reference to the access points. Only 2.76% (n=5) of respondents were of the opinion that the access points are "unsafe". "Isolation" and "darkness" were each a concern for 1.66% (n=3) of all respondents.

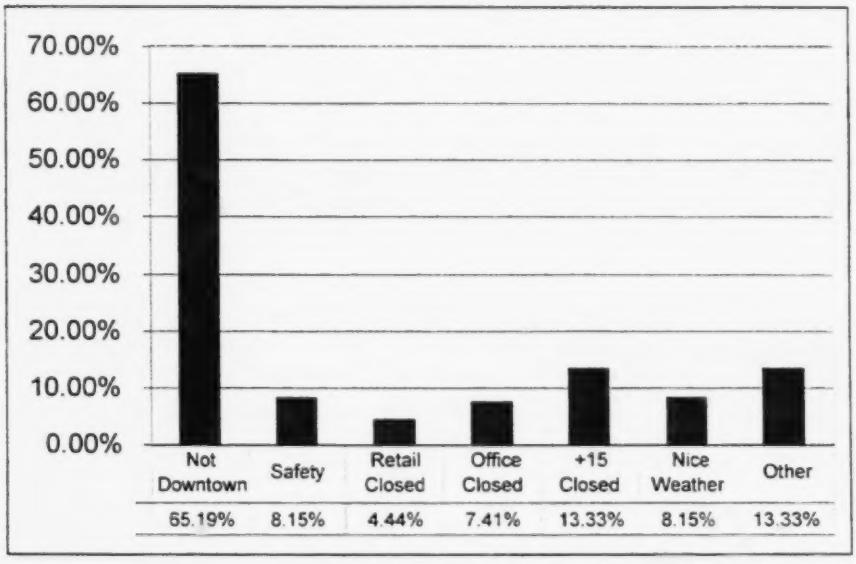
In reference to the open spaces located throughout the system, the social factors of "panhandling", people "sleeping", "loitering", "vandalism" and "intoxication" represent a concern for a combined for a total of 8.28% (n=15) of respondents.

Avoidance Behaviours on the System Generally

Respondents were asked if they do not use the +15 system at certain times of the day or week or if they deliberately avoid certain parts of the +15 system. Nearly 75% (n=135) of all respondents indicated that they do not use the +15 system at certain times of the day or week, particularly "at night" (38.52% • n=52) and "on weekends" (65.93% • n=89). However, safety and safety related concerns account for only 8.15% (n=11) of the reasons why some respondents do not use the +15 system. Figure 2.13 shows that the primary reason respondents report not using the +15 at certain times is that they are simply "not downtown" (65.19% • n=88).

These results for why people do not use the system at certain times of the day or week are not surprising given the general user patterns and characteristics of the majority of respondents. However, it is important to note that very few respondents identified safety as a reason for not using the system.

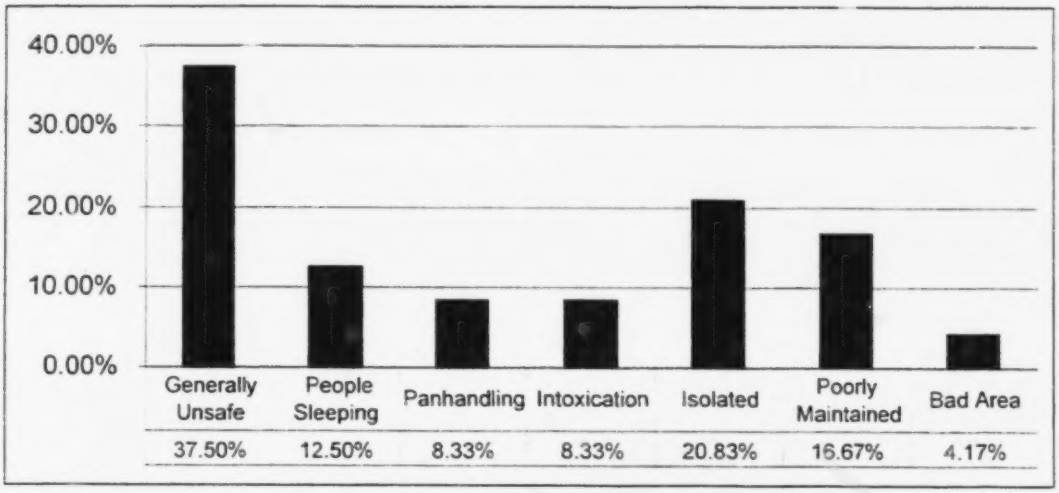
Figure 2.13: Why +15 System is Not Used at Certain Times (N=135)



Avoidance of Particular Parts of the System

Safety and related issues figure more prominently as the reason why a reported 13.26% (n=24) of all 181 respondents avoid particular sections of the +15 system. Though a only a small proportion of respondents avoid particular sections, safety and related issues account for 59% of the reasons given for avoiding those sections. Figure 2.14 shows the breakdown of safety related concerns identified as reasons why the small proportion of respondents avoid particular sections of the +15 system.

Figure 2.14: Safety Related Reasons for Avoiding Particular Parts of System (N=24)



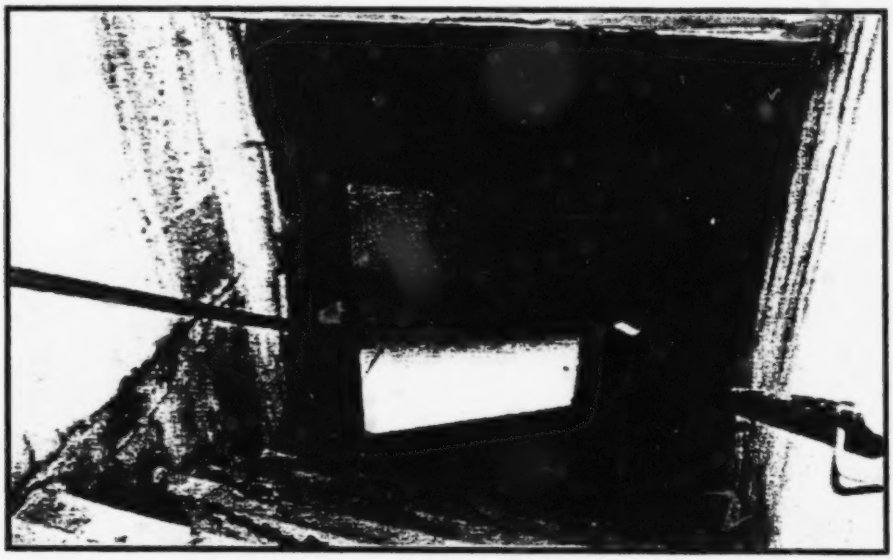


Photo 8: Type of Area People May Avoid

Gender and Age Differences in Personal Safety

It is not uncommon that women and older people experience greater concern over their personal safety. In this study there is no significant differences in perceived safety among men and women, or in different age categories. This is likely due to the very small proportion who report safety and safety related concerns.

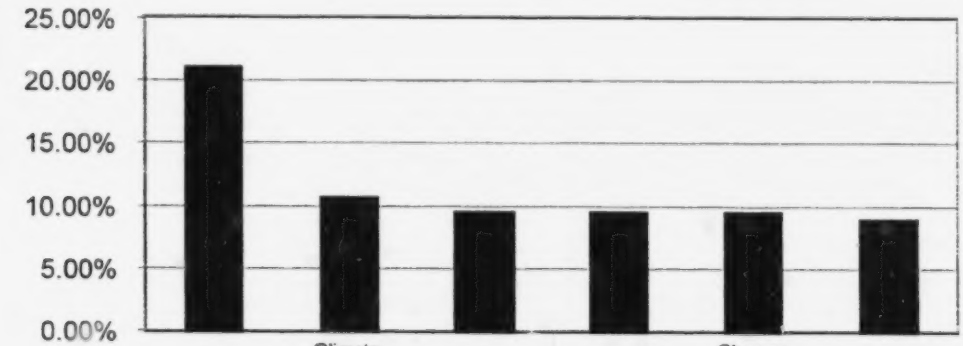
General Perceptions of the +15 System

User Likes and Dislikes

In an attempt to gather information about what is important to +15 users, respondents were asked generally what they dislike about using the +15 system, and what improvements they would like to see made to it. What people like about using the system is inferred from the main reasons people are using the system as described above.

When asked directly what they don't like about using the system, the majority of respondents (29.28% • n=53) replied that they "like everything". Figure 2.15 shows the most common responses. "Gaps in the system", inconsistencies in "climate control", "confusing sections", "inconvenience", "closure times" or hours of operation, and heavy "doors" are the top responses.

Figure 2.15: What Respondents Don't Like About Using the System (N=181)



Though most are satisfied with the system, when pressed to think about improvements, 52.49% (n=95) of all 181 respondents thought of improvements they would like to see made. Wayfinding features were the most common response. Those 95 respondents who would like to see improvements made to the +15 system would like to see "signs" (26.31% • n=25), "directional indicators" (24.21% • n=23), and "maps" (21.05% • n=20) improved. Other improvements noted were "more bridges" or links (21.05% • n=20), changes to "hours of operation" (15.78% • n=15), better "climate control" (14.74% • n=14), improvements to "doors" (14.74% • n=14), and improved "access/exit points" (9.47% • n=9).

Expansion of the System

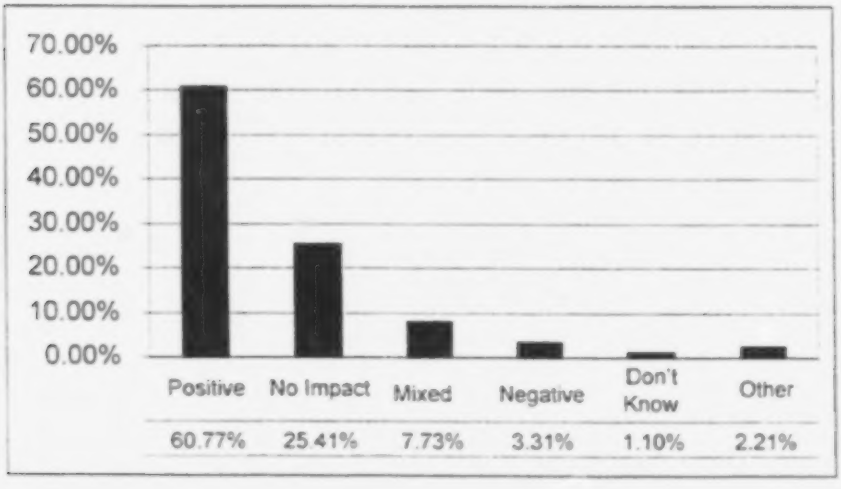
Most respondents would like to see the system expanded in the downtown. When asked if there are parts of the downtown that are currently missing +15 links, over two-thirds (66.30% • n=120) of respondents felt that the downtown currently lacks bridges in some areas. The areas identified by respondents were mainly links that would make trips between office towers and retail malls more convenient. For example, "Bow Valley Square" was mentioned by over 25% (n=31) of respondents who identified missing links. Most of the missing connections identified from Bow Valley were towards the "Bay", "Eatons" and "TD Square". However, it is likely that the areas identified are partly a function of the location of the interviews, particularly since most respondents tend to make short, routine and convenient journeys on the +15 system.

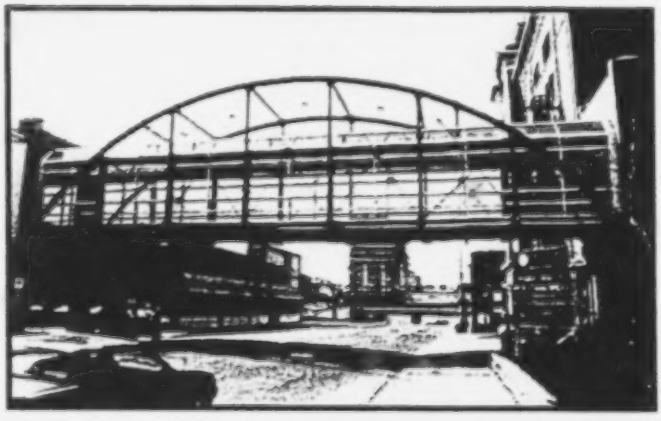
When asked if there are any areas of the downtown where +15 bridges should not be built in the future, only 11.6% (n=21) all 181 respondents believed some areas of the downtown should be protected from future expansion. The areas identified are special areas of the downtown, including "Stephen Avenue Mall", areas where there are "views" out of the downtown, and near the river. The reasons given for protecting these areas are to preserve the "vistas", allow for natural "sunlight", to keep the sidewalk "pedestrian" friendly, and to preserve the integrity of "historical" buildings.

Appearance of +15 Bridges

The vast majority of respondents indicated that they like the way +15 bridges look from street level. Over 91% (n=166) of all respondents said that the bridges themselves are visually appealing. When the appearance of the bridges were put in the context of the entire downtown, the results are similar. More than 86% (n=156) of respondents believe that the +15 bridges have either "no impact" or a "positive visual impact" on the way that the downtown looks. Figure 2.16 illustrates that very few respondents (3.31% • n=6) believe that +15 bridges have a "negative impact" on the visual quality of the downtown.

Figure 2.16: Visual Impact of Bridges on the Downtown





Photos 9, 10, & 11: Different Bridge Styles

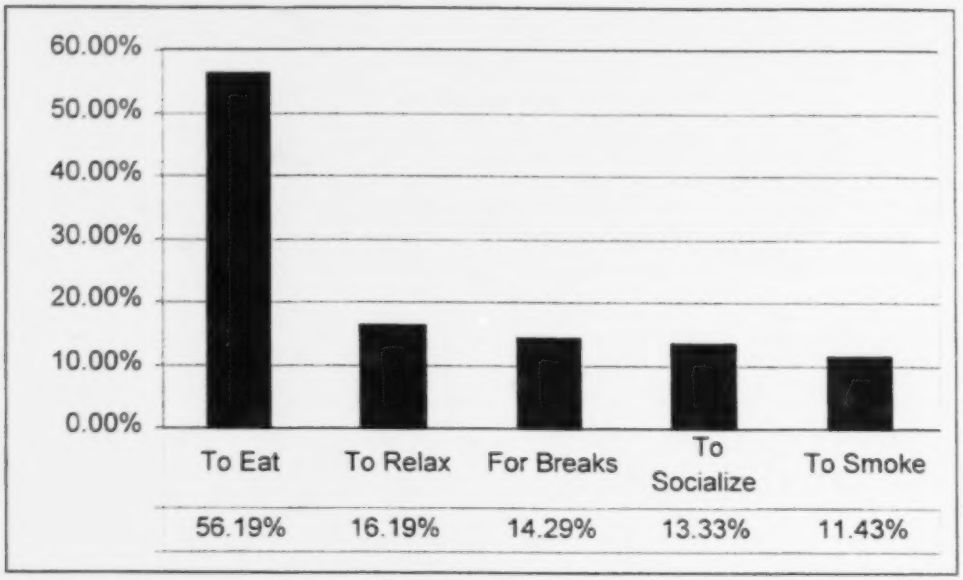
+15 Open Spaces

Some general information was gathered on the open spaces, seating areas and gardens located at the +15 level throughout the downtown. Of interest was how frequently respondents use these amenities and their general opinions of them.

Photos 12 & 13: Indoor and Outdoor +15 Open Spaces

Over 58% (n=105) of respondents use the open spaces provided on the +15 level compared to the 42% (n=75) who claimed that they did not use them. Of the respondents who use the open spaces (n=105), 45.71% (n=48) use them more than "once a week". A further 17.07% (n=24) use them more than "once a month". Figure 2.17 shows the main reasons why people use the +15 open spaces, with the majority of people using them for their "lunch breaks" or other routines that could be expected during an average workday.

Figure 2.17: Why Respondents Use Open Spaces (N=105)



Respondents who indicated that they used the +15 open spaces (n=105) were asked what they like about using them in addition to why they use them. A place to get "fresh air" (31.43% • n=33), because they are "relaxing" (28.57% • n=30), the "vegetation" (26.67% • n=28), for "convenience" (15.23% • n=16) and because they are "quiet" (15.23% • n=16) were the characteristics of the open spaces that respondents liked the most.

All 181 respondents were asked what they do not like about the open spaces or the reasons why they do not use them. The majority of respondents responded that they "like everything" (44.75% • n=81) or that they "do not use them" (18.78% • n=34). For those who offered a negative opinion about the open spaces, the perception that they are "crowded" accounts for 13.26% (n=24) of all respondents, the presence of "smokers" another 6.07% (n=11) and people "loitering" 2.76% (n=5).

Generally, it appears that respondents who use the +15 system enjoy them, and those that do not use them choose not to for reasons other than problems or issues in the open spaces themselves.

Summary

Respondents Like the +15 System

The results indicate that the majority of +15 users like the +15 system, value it as an alternative to the sidewalk, and generally feel comfortable using it as part of their daily workday routine in the downtown. The major issues of wayfinding and personal safety identified in prior research and audits do not appear to be major concerns among the respondents to the survey.

In Part III, the preceding findings will be discussed with the intent of offering some plausible explanations for the findings in the survey by relating the findings to one another.

Part III:
DISCUSSION AND CONCLUSIONS

User Groups and Patterns

Main Hypothesis – The level of user comfort is directly related to perceived levels of safety and the ability of one to navigate the system effectively.

The Domain of the Downtown Employee

Respondents Live or Work Downtown

Hypothesis 1 (Page 5) surmised that: **"People who routinely use the +15 system either live or work in the downtown. These people will feel more comfortable using the +15 system than those who do not live or work in the downtown."** The first element of this hypothesis necessitates an examination of what proportion of respondents to the survey live or work in the downtown.

The finding that the predominant user group identified in the survey is comprised of people who work in the downtown (91.01%) is not necessarily surprising. Given the relatively small number of people who live in the downtown and the general tendency for people to commute to work from the suburbs, one would expect that the population of the downtown increases dramatically during normal working hours. This finding becomes even more understandable when the types of buildings connected by the +15 system are brought into consideration. Substantial proportions of the land uses served by the +15 system are either office buildings or retail malls, with few links to residential buildings or other uses. Since respondents use the +15 system mostly for short trips when the +15 system is more convenient, it is understandable that the primary user population is office workers who use the system as part of their daily routines.

Cross-tabulation analysis (Table 3.1) shows that only 6.63% (n=12) of respondents have never lived or worked in the downtown. When the known visitors to Calgary are controlled for, the percentage drops to 4.97% (n=9). This means that over 93% (n=169) of all survey respondents either live or have worked in the downtown and if visitors are controlled for the total is nearly 95%.

The reality that the user population is largely office workers is reflected in the pedestrian flows during non-working hours. On the Friday of the interviews, the pedestrian flow decreased dramatically in the afternoon, with most traffic located around the major retail malls. On the Saturday of the interviews there was virtually no traffic around the periphery of the system, as all pedestrian traffic was clustered in the retail areas. In fact, many of the peripheral sections were closed, including the shops and services located around these sections. Entire food courts on the +15 level are closed all day Saturday and Sunday, likely because there is not enough +15 traffic during non-working hours to support these businesses.

Table 3.1: Cross-Tabulation of Residence and Workplace

N=181	Work Downtown		Do Not Work Downtown		Have Worked Downtown		Totals
Live Downtown	13.1%	80% 11.1% n=20	22.2%	16% 2.2% n=4	9.1%	4% 0.5% n=1	100% 13.8% n=25
Live in Calgary	78.9%	85.7% 66.3% n=120	66.6%	8.6% 6.6% n=12	73.7%	5.7% 4.4% n=8	100% 77.3% n=140
Do Not Live in Calgary	7.9%	75% 6.6% n=12	11.1%	12.5% 1.1% n=2	18.1%	12.5% 1.1% n=2	100% 8.8% n=16
Totals	100%	83.9% n=152	100%	9.9% n=18	100%	6.1% n=11	100% n=181

One interesting finding is that over 11% (n=20) of respondents who work downtown and use the system also live downtown. Considering the fact that only 1.4% of Calgarians live downtown, a very high proportion of respondents seem to have located close to where they work. This finding correlates from other cities such as Vancouver and Toronto.

One surprising finding related to the user group analysis was the very small proportion of the sample (n=181) who were visitors to Calgary (1.66% • n=3). Since the survey was conducted during the summer, it was anticipated that there would be a higher number of visitors encountered during the interviews. However, during the interviews it was noted that the +15 system currently as few links with hotels and other locations – except for retail malls – that would be an attraction for visitors.

As described in **Hypothesis 1**, these findings regarding where +15 users live and work will likely influence how comfortable they are in using the system. In later sections, the levels of comfort experienced by +15 users who live work downtown will be compared to those who do not live or work downtown. In particular, the effects of familiarity will be discussed in reference to wayfinding and personal safety issues.

Respondents Make Routine Trips

Hypothesis 2 theorizes that ***"– Individuals who routinely use a particular section of the +15 system will feel more comfortable using that section than using unfamiliar sections of the system."*** This is based on the assumption that if there is a relatively homogenous user group on the +15 system, they will likely have predictable behaviours and movement patterns – as illustrated in pedestrian flows and operating hours on the +15 system. Routine usage of a particular area will make the user familiar with the section

of the system that they use routinely. At issue is whether or not users tend to make routine trips through at least part of the +15 system, with routine being defined as the making the same trip more than once per week.

It was found in the survey that the majority of users (78.45% • n=142) were in fact making routine trips that mainly covered short distances. Most respondents indicated that their trip on the +15 had originated at a workplace and would terminate at a workplace. Cross-tabulation reveals that 64.64% (n=117) of all respondents were heading from work to work either at a different workplace or returning to their origin point via some other stop in the downtown. Typical patterns among respondents appear to be using the +15 for errands, breaks and to travel between offices.

These patterns would likely indicate that the trips made by office workers on the +15 system are routine in nature. Table 3.2 displays the cross-tabulation analysis that compares the proportion of people who work or have worked downtown to those who were making a routine trip at the time they were interviewed. Figure 3.3 shows the same analysis for the residential location of survey respondents.

Table 3.2: Cross-tabulation of Workplace by Routine Trip

N=181	Work Downtown		Do Not Work Downtown		Have Worked Downtown		Totals
Routine Trip	82.9%	88.1% **69.6%** **n=126**	44.4%	5.6% **4.4%** **n=8**	81.8%	6.3% **4.9%** **n=9**	**100%** **79%** **n=143**
Not Routine Trip	15.8%	70.6% **13.3%** **n=24**	50%	26.5% **4.9%** **n=9**	18.2%	5.9% **1.1%** **n=2**	**100%** **18.8%** **n=34**
Don't Know	0%	0% **0%** **n=0**	0%	0% **0%** **n=0**	0%	0% **0%** **n=0**	**100%** **0%** **n=0**
Other	1.3%	66.7% **1.1%** **n=2**	5.5%	33.3% **.5%** **n=1**	0%	0% **0%** **n=0**	**100%** **1.7%** **n=3**
Totals	**100%**	**83.9%** **n=152**	**100%**	**9.9%** **n=18**	**100%**	**6.2%** **n=11**	**100%** **N=181**

In Figure 3.2 it becomes apparent that those who work in the downtown make more routine trips on the +15 than those who do not work downtown. Out of the respondents who work downtown (n=152), 82.89% (n=126) were making a routine trip compared to 44.44% (n=8) of the 18 respondents who have never worked downtown. Over 81% of the 11 respondents who have previously worked downtown reported that they were making a routine journey on the +15 system at the time of the interview.

The results in Table 3.3 show a very similar pattern for those who live in the downtown. A total of 21 of the 25 respondents who live downtown were making a routine journey at the time of the interview representing 84%. The results for those who do not live in Calgary are not particularly relevant since many of these respondents work in the downtown. However, when the people who do not live in Calgary are considered, 50% (n=8) of the total were making a routine trip.

Table 3.3: Cross-tabulation of Live Downtown by Routine Trip

N=181	Live Downtown		Do Not Live Downtown		Don't Live Calgary		Totals
Routine Trip	84%	14.7% **11.6%** **n=21**	81.4%	79.7% **62.9%** **n=114**	50%	5.6% **4.4%** **n=8**	**100%** **79%** **n=143**
Not Routine Trip	12%	8.6% **1.7%** **n=3**	17.1%	68.6% **13.3%** **n=24**	50%	22.9% **4.4%** **n=8**	**100%** **19.3%** **n=35**
Don't Know	0%	0% **0%** **n=0**	0%	0% **0%** **n=0**	0%	0% **0%** **n=0**	**0%** **0%** **n=0**
Other	4%	33.3% **0.5%** **n=1**	1.4%	66.7% **1.1%** **n=2**	0%	0% **0%** **n=0**	**100%** **1.7%** **n=3**
Totals	**100%**	**13.8%** **n=25**	**100%**	**77.3%** **n=140**	**100%**	**8.84%** **n=16**	**100%** **N=181**

It can be inferred from these findings that the respondents who live or work in the downtown will be familiar with at least the parts of the +15 system they use frequently. However, there does not seem to be any relationship between working downtown and familiarity with the entire system. In Table 3.4, the analysis shows that only some of the locations listed show very minor differences in familiarity with the locations listed. For the Calgary Public Library location, most who had used the system in this location did not work downtown. Again however, the finding that a high proportion of people who work downtown use the retail malls and the services within these locations is particularly relevant. It would appear that respondents use the +15 system for short routine trips on a frequent basis.

The majority of respondents were using the system for "convenience" on the day of the interview (44.7%). Convenience as a main reason for using the +15 system may also indicate the short nature of most trips on the +15 system. The current design of the +15 system is such that long trips through the downtown may not be as convenient on the +15 system as on the street or by other means such as the C-train or taxicab. A substantial proportion of respondents indicated this through their perceptions that some areas of the downtown are missing +15 bridges or linkages. The prominence of responses indicating the need for new connections around "Bow Valley Square" in the

direction of the Bay or the main retail area shows that convenience is a primary concern for respondents and also that the +15 may not be convenient for longer trips in the downtown. Generally, they would like to see more bridges in areas where it would make it more convenient for them to conduct their daily routines while downtown. Quick access to retail malls and services such as food appear to be attractive features of the +15 system for respondents.

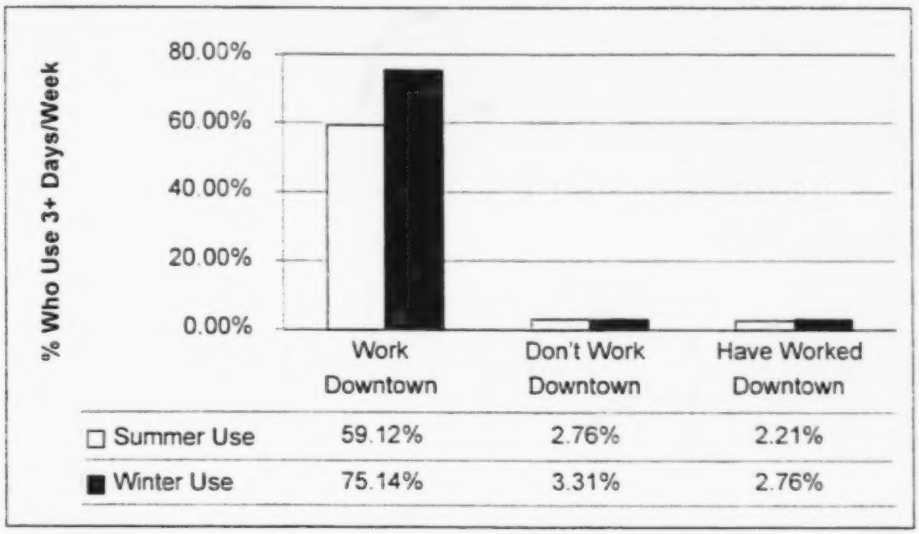
Table 3.4: Cross-tabulation – Work Downtown and +15 Locations

N=181	Work Downtown	Don't Work Downtown	Have Worked Downtown	Total
Calgary Tower				
Have Used	35.35%•n=64	6.08%•n=11	4.42%•n=8	**45.86%•n=83**
Have Not Used	48.61%•n=88	3.87%•n=7	1.66%•n=3	**54.14%•n=98**
Don't Know	0%•n=0	0%•n=0	0%•n=0	**0%•n=0**
Total	**83.98%•n=152**	**9.94%•n=18**	**6.08%•n=11**	**100%•n=181**
Public Library				
Have Used	22.10%•n=40	7.18%•n=13	1.10%•n=2	**30.39%•n=55**
Have Not Used	60.77%•n=110	2.76%•n=5	0%•n=0	**68.51%•n=124**
Don't Know	1.10%•n=2	0%•n=0	4.97%•n=9	**1.10%•n=2**
Total	**83.98%•n=152**	**9.94%•n=18**	**6.08%•n=11**	**100%•n=181**
Bankers Hall				
Have Used	79.56%•n=144	7.73%•n=14	6.08%•n=11	**93.37%•n=169**
Have Not Used	4.42%•n=8	2.21%•n=4	0%•n=0	**6.63%•n=12**
Don't Know	0%•n=0	0%•n=0	0%•n=0	**0%•n=0**
Total	**83.98%•n=152**	**9.94%•n=18**	**6.08%•n=11**	**100%•n=181**
Bow ValleySq.				
Have Used	74.03%•n=134	4.97%•n=9	5.52%•n=10	**84.53%•n=153**
Have Not Used	9.39%•n=17	4.97%•n=9	0.55%•n=1	**14.92%•n=27**
Don't Know	0.55%•n=1	0%•n=0	0%•n=0	**0.55%•n=1**
Total	**83.98%•n=152**	**9.94%•n=18**	**6.08%•n=11**	**100%•n=181**
Shell Centre				
Have Used	48.62%•n=88	2.21%•n=4	4.42%•n=8	**55.80%•n=101**
Have Not Used	13.81%•n=63	2.21%•n=14	1.66%•n=3	**43.65%•n=79**
Don't Know	0.55%•n=1	0%•n=0	0%•n=0	**0.55%•n=1**
Total	**83.98%•n=152**	**9.94%•n=18**	**6.08%•n=11**	**100%•n=181**
Fifth and Fifth				
Have Used	56.91%•n=103	4.97%•n=9	3.87%•n=7	**65.75%•n=119**
Have Not Used	25.41%•n=46	4.97%•n=9	2.21%•n=4	**32.60%•n=59**
Don't Know	1.66%•n=3	0%•n=0	0%•n=0	**1.66%•n=3**
Total	**83.98%•n=152**	**9.94%•n=18**	**6.08%•n=11**	**100%•n=181**
W. Cdn Place				
Have Used	44.75%•n=81	2.21%•n=4	2.76%•n=5	**50.28%•n=91**
Have Not Used	36.46%•n=66	7.73%•n=14	3.31%•n=6	**46.96%•n=85**
Don't Know	2.76%•n=5	0%•n=0	0%•n=0	**2.76%•n=5**
Total	**83.98%•n=152**	**9.94%•n=18**	**6.08%•n=11**	**100%•n=181**

Respondents Use it Frequently

An element of the hypotheses proposed at the outset of the research is premised on user patterns, and in particular familiarity with all or part of the system. It is likely that there is a direct relationship between frequency of use and familiarity. Figure 3.1 shows the percentage of people who use the +15 system three days a week or more cross-tabulated with employment location. It is apparent that the respondents who work in the downtown use the system far more frequently than those who do not work in the downtown.

Figure 3.1: Cross-Tabulation of Users That Work Downtown and Users That Use the System More than 3 Days Per Week (N=181)



	Work Downtown	Don't Work Downtown	Have Worked Downtown
□ Summer Use	59.12%	2.76%	2.21%
■ Winter Use	75.14%	3.31%	2.76%

In the next section, the findings relating to frequency of use and patterns of use will be related to the survey findings concerning wayfinding and personal safety.

Safety, Wayfinding and Familiarity

Potential Effects of Familiarity

Hypothesis 3 predicts that users will be less afraid for their personal safety and will be able to find their way through the system more effectively if they are familiar with the system. This hypothesis is informed by social science research on the effects of familiarity and human behaviour in built environments. The essence of this research is that people who are familiar with certain built environments react differently to those environments on a perceptual level, which may ultimately influence their behaviour.

The effects of familiarity on wayfinding are quite simple. As people become familiar with a section of the +15 system, they soon learn which direction to go to get to their desired destination. Though the first few times through a particular section may be confusing, after several experiences in navigating a particular section successfully, users are able to find their way easily. If the journey is a routine trip, users are likely able to find their destination with very little thought. As an analogy, studies have examined the effects of routine vehicle trips compared to trips in unfamiliar places[2]. These studies have shown that routine trips require little concentration compared to trips that are unfamiliar. For example, people often drive home from work, and upon their arrival can barely remember the journey itself, whereas people travelling through unfamiliar areas show heightened levels of concentration as they search for clues about which direction to go.

A very similar, albeit more complex, process can influence perceptions of personal safety[3]. As people pass through unfamiliar environments, they are constantly scanning the environment for cues that indicate the type of environment they are in. Physical and social features of the immediate environment can lead to perceptions that an area is safe or unsafe. The presence of graffiti, vandalism, people sleeping, panhandling, intoxicated people and people loitering can lead to individual perceptions that the surrounding environment may be threatening or unsafe. However, as people become familiar with an area, and have safely made their way through the environment numerous times, they tend to consider these physical or social features a part of the environment. The result is that the physical and social characteristics do not have as strong of an influence on perceptions of safety of regular users as they tend not to notice these characteristics.

This is the theoretical basis for the hypotheses that relate familiarity to the issues of personal safety and wayfinding. Given the small number of respondents who report wayfinding and safety concerns, the association between these findings is not necessarily clear in this study.

[2] Matlin, M. (1989). *Cognition*. Toronto: Harcourt Brace Jovanovich.
[3] Fischer, B. & Nasar, J.L. (1995). Fear Spots in Relation to Microlevel Physical Cues: Exploring the Overlooked. *Journal of Research in Crime and Delinquency*. 32(2). Pp. 214-239.

Familiarity and Wayfinding

Generally, respondents do not experience problems with finding their way through the +15 system, as 81.22% (n=147) of all 181 respondents report that the system is easy to navigate. Given the routine nature of the trips respondents were making on the day of the interviews, it is not surprising that many of them do not experience wayfinding difficulties on the sections of the +15 system that they use. Table 3.5 represents the results of cross-tabulation of workplace location and ease of wayfinding. The results show a moderate relationship between ease of wayfinding and whether or not people work downtown. Of those who do work downtown (n=152), 81.58% feel the system is easy to navigate. This compares to the 77.78% (n=14) of the 18 respondents who do not work downtown that reported the +15 system is easy to navigate. Similar results were found for those who have previously worked in the downtown. This may indicate that the system is easy to navigate, and that even people who are not as familiar with particular sections may be able to find their way with relative ease. These findings may be due in part to the short, direct nature of many trips on the +15 system.

Table 3.5: Cross-Tabulation – Ease of Wayfinding and Workplace Location

N=181	Work Downtown		Do Not Work Downtown		Have Worked Downtown		Totals
Is Easy	81.6%	84.3% **68.5%** **n=124**	77.8%	9.5% **7.7%** **n=14**	81.8%	6.1% **4.9%** **n=9**	100% **81.2%** **n=147**
Is Not Easy	12.5%	82.6% **10.5%** **n=19**	11.1%	8.7% **1.1%** **n=2**	18.2%	8.7% **1.1%** **n=2**	100% **12.7%** **n=23**
Easy If Familiar	5.3%	100% **4.4%** **n=8**	0%	0% **0%** **n=0**	0%	0% **0%** **n=0**	100% **4.4%** **n=8**
Don't Know	0%	0% **0%** **n=0**	0%	0% **0%** **n=0**	0%	0% **0%** **n=0**	**0%** **0%** **n=0**
Other	0.6%	33.3% **0.5%** **n=1**	11.1%	66.7& **1.1%** **n=2**	0%	0% **0%** **n=0**	100% **1.7%** **n=3**
Totals	100%	83.98 % n=152	100%	9.9% n=18	100%	6.1% n=11	100% N=181

What is interesting about these findings is that the reason many respondents claim that they sometimes feel lost or disoriented is because they are "unfamiliar" with some sections of the +15 system. Nearly 83% of those who reported unfamiliarity as a reason for feeling lost or disoriented work in the downtown. This is interesting given the high proportion of respondents that work downtown who report using the +15 regularly. This may be another indication of the type of trips that respondents make on the +15 system, and their knowledge of the whole system. From Table 3.5 it is apparent that many people who work in the downtown and use the system routinely recognize that there are sections of the system that make them feel lost or disoriented because they are not familiar with them. Since the majority of respondents who report feeling lost or disoriented (n=74) report this is a "rare" occurrence (50% • n=37), it may be inferred that that most trips are routine and on the rare occasion they feel lost it is likely during an atypical trip in an unfamiliar area.

When respondents were asked what they would look for if they were on the street looking for access to the +15 system, many respondents said they know where the access/exit points are. Interviewers were instructed to probe further and ask respondents what they would look for if they were in an unfamiliar part of the downtown and looking to access the system. Though most responses fit the answers provided, several respondents indicated that they would not use the +15 system if they were in an unfamiliar section or if they had a considerable distance to travel through the downtown. Some indicated that they would travel at grade or take the C-train or a taxi-cab if the weather was poor. Though these responses are not statistically significant, they may be indicative that some users view the +15 system as a convenient alternative for short, routine trips. Yet, they are aware that in cases where they have to travel considerable distance through unfamiliar sections, other modes of travel may be more practical.

Orientation of +15 to the Street

Planning has been influenced for decades by the works of Kevin Lynch and his theories on how people orient themselves in urban environments. In particular, landmarks and pathways are believed to be influential in helping people figure out where they are -- and where they are going -- in urban settings. Although these features may exist at a micro scale on the +15 system, the relationship between the +15 system and the rest of the downtown may be important in terms of wayfinding. The ability to see landmarks in the downtown or even outside the downtown from the +15 level may be influential in helping people determine where they are and which way they are heading on the +15 system.

Over 87% (n=158) of respondents were of the opinion that it is easier to navigate the system effectively if they can see the streets or buildings outside. **Hypothesis 6** proposed that: **"T*he sections identified as most confusing and disorienting will be the sections that pass through retail areas, plazas, and the interior of buildings.*"** A substantial portion (58.11% • n=43) of those respondents who reported ever feeling lost or disoriented on the +15 system (n=74) did in fact indicate that the interior sections of buildings are the locations where they most frequently feel lost or disoriented. Cross-tabulation

analysis reveals that of those respondents who report feeling lost inside buildings, 93% (n=40) believe it would be easier to find their way if they could see outside.

It appears from these findings that the orientation of the +15 to the street is an important wayfinding feature to most respondents. Many of the interior sections of the +15 system make people choose between several options in terms of which direction they can go. In some instances, the system was reported to be confusing because some of the interior path options lead off of the system.

Hypothesis 4 is that: ***"People who use the +15 system frequently rely more on landmarks and other physical elements than on signage to navigate the system."*** An interesting finding that emerged is that many of the landmarks people do in fact use to find their way on the +15 system are the same landmarks people would use if they were travelling through the downtown on the street. Though there are interesting features -- such as artworks, sculptures and displays -- within the +15 system that could be used as landmarks, most respondents did not report these as significant wayfinding features. Rather they identified signage and the ability to see outside as the two predominant physical wayfinding features. Cross-tabulation of frequency of use in winter and physical wayfinding features shows only a moderate relationship between familiarity and use of landmarks outside the +15 system as a means of wayfinding. Among the 45 respondents who named physical features, the 27 or 60% who named signage as a prominent wayfinding feature, and the 27 of the 38 people (71%) who identified the ability to see outside use the +15 system more than 5 days per week.

These findings may indicate that the familiarity hypotheses discussed above extends beyond the +15 itself to familiarity with the downtown. The proportion of respondents who report that it is easier for them to find their way when there are signs indicating the "names of streets" or "buildings" also indicates that familiarity with the downtown and the relation of the +15 system to the street are valuable wayfinding features. "Building name" signs were identified by 39.58% (n=38) as the most useful type of signage for the 96 respondents who believed some signs are more useful than others.

It seems that many respondents approach the +15 system in a manner similar to how they would travel on the sidewalk. They use some of the same landmarks, and rely on street names and familiar building names to find their way. It is also possible that they navigate unfamiliar or confusing parts of the +15 system as they would navigate unfamiliar streets, by searching for recognizable cues or landmarks, and if unable to find their way on their own, they would simply ask for directions to their destination.

Signs are Useful

Hypothesis 5 suggests that "***Those who are dependent on existing signage and maps to navigate the system will find the system more difficult to use than those who are familiar with the system through routine usage.***" The basis for this hypothesis is borne out of concerns raised through audits of the +15 system and the building owners and managers who assert that the existing signage is inconsistent and inadequate. The results generally indicate that respondents do not have concerns about the existing signage with the possible exception of the 33% (n=60) of all 181 respondents who would like to see more signs on the +15 system.

Table 3.6 shows a cross-tabulation of respondents that "ever feel lost or disoriented" and the perceived usefulness of the existing signage on the +15 system. However, when the percentage of people who feel lost or disoriented is compared to those who do not, it reveals that over 64% (n=48) of the 74 people who do feel lost still believe the signage is useful. For those who do not feel lost or disoriented (n=105), 77.14% feel the signage is useful. In this regard there seems to be only slight differences in the perceived usefulness of signage among respondents who do and who never feel lost or disoriented. For those that do experience disorientation, it is likely not solely a function of inadequate signage on the +15 system.

Table 3.6: Ever Feel Lost and Usefulness of Signage

N=181	Yes Lost or Disoriented		No, Not Lost or Disoriented		Don't Know/Other		Totals
Useful	64.9%	36.9% **26.5%** **n=48**	77.1%	62.3% **44.7%** **n=81**	100%	0.8% **0.5%** **n=1**	**100%** **71.8%** **n=130**
Not Useful	21.6%	59.3% **8.8%** **n=16**	10.5%	40.7% **6.1%** **n=11**	0%	0% **0%** **n=0**	**100%** **14.9%** **n=27**
Don't Know	0%	0% **0%** **n=0**	4.8%	100% **2.8%** **n=5**	0%	0% **0%** **n=0**	**100%** **2.8%** **n=5**
Other	9.5%	70% **3.9%** **n=7**	2.9%	30% **1.7%** **n=3**	0%	0% **0%** **n=0**	**0%** **5.5%** **n=10**
Don't Use	2.7%	22.2% **1.1%** **n=2**	6.7%	77.8% **3.9%** **n=7**	0%	0% **0%** **n=0**	**100%** **4.9%** **n=9**
Totals	**100%**	**40.9%** **n=74**	**100%**	**58%** **n=105**	**100%**	**0.5%** **n=1**	**100%** **N=181**

Another variable of interest is whether or not the perceived effectiveness of the signage is related to frequency of use. It appears that there is no relationship between signage effectiveness and frequency of use of the +15 system in general as even those who do not use the system frequently in the winter still believe the signage is useful. Of the 13 respondents who use the system either "never" or "occasionally", only 2 feel that the current signage is not useful.

The general conclusion among the respondents to the survey is that they believe the existing signage is useful and helpful in guiding them through the +15 system. They do not identify any major concerns or problems with the format of the existing signs, nor the clarity of those signs as a total of 79.55% (n=144) of all 181 respondents believe the signs are "satisfactory" or "very easy" to read.

Personal Safety

A Caveat

The following analysis is based on the responses to the safety related questions posed during the interview surveys. However, since very few respondents related real or perceived concerns over their personal safety, there is not much data to analyze, which in itself is an encouraging result. The intent here is to search for any potential relationships that may exist between safety related concerns, or lack thereof, and familiarity with all or part of the +15 system and other variables that may be researched more thoroughly in the future.

Familiarity and Perceptions of Personal Safety

As discussed in the preceding sections, physical and social characteristics of the +15 system may influence perceptions of safety among users and ultimately patterns of use. When the results of the survey are compared to the results of the 1998 Planning and Building study of security personnel, the physical and social incivilities identified by security personnel (such as panhandling, graffiti, and vandalism) were not reported by many respondents as something they do not like about using the +15 system. Under 2% (n=3) highlighted these as something they do not like about using the +15 system. This may be due to the fact that most respondents were interviewed in areas where they did not encounter these incivilities. However, due to the limited number of responses it is not possible at this time to test whether these incivilities may affect perceptions of safety.

The primary variable of interest in terms of perceptions of personal safety was hypothesized in **Hypothesis 3** to be regularity of use and familiarity. It was presumed that those who are familiar with all or part of the system will feel more safe than those who are not as familiar with the +15 system. Cross-tabulation of employment location and why people do not use the +15 at

certain times does not show any relationship between familiarity with the system and perceptions of safety or avoidance behaviours. Similar analysis using different combinations of these variables, residence location, and frequency of use also show no discernable relationship.

Though the results are insufficient to analyze relationships between these variables, the finding that there are few safety concerns may be a consequence of user characteristics and patterns of use. Since the majority of respondents either work in the downtown and use the +15 system for short work related trips, they do not use the system on weekends and evenings. These are the times identified as the most problematic on the +15 system in the 1998 survey of security personnel. The short, routine nature of most trips also indicates familiarity with the sections that respondents use most frequently. It is possible that the low level of reporting for safety related issues may be a function of these factors.

In addition, the times when most respondents use the +15 system may be characterized as 'peak periods'. During these times there is a significant amount of pedestrian travel on the system, comprised primarily of office workers and shoppers. It is possible that users feel safe when surrounded by users with similar characteristics. If they were to use the system during off peak hours when there are fewer people on the system, the perceived isolation may make them feel more concerned, particularly in sections which exhibit potentially fear inducing social and physical characteristics.

Personal Safety and Wayfinding

Though personal safety and wayfinding have been dealt with independently for the purposes of this report, they may be linked. When people in unfamiliar environment scan for cues about which direction to travel, the heightened perceptual awareness may make them more sensitive to signs of incivilities that may make them feel afraid. However, cross-tabulation analysis of those respondents who feel lost or disoriented and those who avoid certain sections of the +15 system reveals there is no discernible relationship. Approximately 8% (n=5) of the 62 respondents who report ever feeling lost or disoriented report personal safety related issues as a reason for avoiding particular sections as do 6.45% (n=6) of the 93 respondents who do not report ever feeling lost.

Personal Safety and Location

The 1998 survey of +15 security personnel identified several areas in which security personnel record 15 or more disturbances per week. The most common types of disturbances recorded are panhandling, graffiti and vandalism. Three of these areas, the Calgary Tower, the Public Library and the Petro-Canada building were covered during this survey. When the locations of the surveys is cross-tabulated with the whether or not respondents avoid using the +15 system in certain areas, the results show a possible relationship. However, the Public Library and the Calgary Tower locations did

not yield enough surveys to test for any relationships. The results for the Petro-Canada location show that 23% (n=5) of the 21 people interviewed at that location avoid certain sections of the +15 system. This compares to an average for all other locations of approximately 11% (18 out of 153 interviews).

Though the Bay Parkade location was not covered in the survey, it was identified in the security survey as an area with many disturbances. When the 24 respondents who avoid certain sections of the +15 system were asked which parts they avoid, the Bay Parkade was the only specific location on the +15 system that was mentioned by more than one respondent. Three respondents representing 12.5% of those who avoid certain areas (n=24) report that they avoid using the Bay Parkade out of concern for their personal safety.

These findings may indicate that although safety is not a primary concern among respondents, areas with many disturbances or incivilities could possibly be the areas that people avoid out of concern for their personal safety.

Research Directions: The Future of the +15 System

Room for Improvement

Users Would Like More +15 Bridges

The impression that emerged from inquiry into what respondents like, dislike, or would like to see improved on the +15 system was that respondents generally like using the +15 system and would like to see it expanded. However, they would only like to see new bridges in locations where those bridges make their short, routine trips on the +15 system more convenient. Given the nature of most trips on the system, it was apparent that most +15 users may not be as concerned with connecting the entire downtown with +15 linkages as they are with building more links that "make sense". The links that "make sense" to many respondents are the links that join the retail malls and services located in the centre of the downtown.

Respondents expressed concern that the current configuration of the +15 system does not adequately service some sections of the downtown. In some areas, respondents indicate that the route they have to take to the centre of the downtown is indirect and inconvenient. This was the typical response of interviewees at the Bow Valley Square survey location. Interestingly, the Planning and Building Department has been trying to negotiate this link for some time.

The users of the system and the +15 system itself would benefit from serious consideration of future +15 linkages and the suitability of proposed bridges given the characteristics of most users and their trips on the +15 system.

The design of future bridges themselves may also warrant further study. Most respondents to this survey indicate that they like the way bridges look. Many people premised this opinion on the perception that there is a variety of bridge designs. Focus groups involving professionals and Calgarians may address the aesthetic features of existing +15 bridges and provide insight into the directions future bridges will take in terms of their physical design.

Changing User Populations

Connecting New Uses

Recent development in the downtown has seen the connection, or proposed connection, of new hotels and residential buildings in the downtown. These new connections may alter the user population of the +15 system in the future. In particular, the connection of new hotels to the system may bring more tourists and visitors onto the system, and these users may experience the system differently in terms of wayfinding and perceptions of personal safety. In the future, consideration should be given to the new +15 connections and the characteristics of the new users that these connections may bring onto the system.

Perhaps at a later date, the findings of this survey may be in need of revision if development continues to introduce new user populations to the system.

A Note on Operating Hours

Under 10% of respondents indicated a concern over the hours of operation of the +15 system. Currently many of the linkages are locked after 6:00 PM and on weekends. It is likely that respondents do not have an issue with these hours because the majority of respondents are simply not downtown at these times.

However, future development in the downtown may see more new residents and visitors who use the +15 system during the current off-peak hours. This may necessitate the revision of operating hours in parts of the +15 system that connect residential and hotel uses to parts of the downtown that attract visitors and residents. If new operating hours are discussed, the implications for security and perceptions of personal safety should be carefully considered.

Conclusions

The 181 responses to the survey indicate that there are some predominant findings about the characteristics of users and their opinions of the +15 system. The finding that the majority of users in the sample population live or work downtown and use the system routinely for short trips may dictate their perceptions about the ease with which they are able to navigate the system and their personal safety.

The general impression garnered from +15 users is that they are more than satisfied with the system in its current form. They view it as a functional and efficient alternative to pedestrian travel on the sidewalk, particularly for short, routine trips.

The major issues of wayfinding and personal safety do not appear to be problematic among respondents to this survey. However, this finding is likely a function of the pronounced user group identified. In the coming years it may be necessary to expand on the findings contained here. Any of the issues addressed in this survey would benefit from in depth research in the future to accommodate the likelihood that the composition of the primary user group may change with future development of the +15 system.

There may be policy implications that emerge from this research and future research efforts. Issues such as operating hours and security policies may benefit from this and any future research which identifies user characteristics, patterns of use and concerns. Specifically, the continued development of the +15 system and the addition of new bridges may be guided by this and other research that indicates which new links would best service +15 users in the downtown.

Appendix A:
SURVEY INSTRUMENT

+15 User Survey

Survey Location: 1 2 3 4

Interviewer: CC JR _____ _____

Date: ____/____/____

Time: _____:_____ ❑ AM / ❑ PM

Weather Conditions: ❑Sunny ❑Cloudy ❑Raining

Outdoor Temperature: ❑Hot (>25C) ❑Mild (10-25C) ❑Cold (<10C)

Hello, I am conducting a survey on behalf of The City of Calgary Planning and Building Department and the Calgary Downtown Association. We are trying to find ways to improve the +15 system and would value your input. The survey will take approximately 6 minutes to complete. You may decline to answer any question or stop the interview at any time.

(Section 1 – User Patterns)

1. About how many days a week do you use the +15 system in the summer?

- ❑ Never
- ❑ Occasionally
- ❑ 1-2 days
- ❑ 3-4 days
- ❑ 5-6 days
- ❑ Every day
- ❑ Don't know
- ❑ Other_____

2. How many days a week in the winter?

- ❑ Never
- ❑ Occasionally
- ❑ 1-2 days
- ❑ 3-4 days
- ❑ 5-6 days
- ❑ Every day
- ❑ Don't know
- ❑ Other_____

3. **Generally speaking, what is the main reason you use the +15 system?**

- ❑ Weather protection
- ❑ Pedestrian/vehicle separation
- ❑ Easier to cross street
- ❑ Convenience
- ❑ Quiet
- ❑ Safe
- ❑ Shopping / restaurants
- ❑ For work
- ❑ Open spaces / gardens
- ❑ Don't know
- ❑ Other_____

4. **Why are you using the +15 system today?**

- ❑ Weather protection
- ❑ Pedestrian/vehicle separation
- ❑ Easier to cross street
- ❑ Convenience
- ❑ Quiet
- ❑ Safe
- ❑ Shopping / restaurants
- ❑ For work
- ❑ Open spaces / gardens
- ❑ Don't know
- ❑ Other_____

5. **Do you prefer using the +15 system over using the sidewalk?**

- ❑ Yes
- ❑ No
- ❑ Depends on weather
- ❑ Depends on where I am
- ❑ Don't know
- ❑ Other_____

6. **What, if anything, DON'T you like about using the +15 system?**

- ❑ Confusing
- ❑ Inconvenient
- ❑ Gaps in the system
- ❑ Access/exit points
- ❑ Dead ends
- ❑ Closure times
- ❑ Unsafe
- ❑ Graffiti/vandalism
- ❑ People loitering
- ❑ People sleeping
- ❑ Intoxicated people
- ❑ Panhandling
- ❑ Not enough retail/service
- ❑ Other_____
- ❑ N/A (Like everything)

7. **How did you travel downtown today?**

- ❑ Private car
- ❑ Taxi
- ❑ Bus
- ❑ C-train
- ❑ Bicycle
- ❑ Walked
- ❑ Other _____

8. **Where are you coming from?**

- ❑ Business meeting
- ❑ Parking lot
- ❑ Retail store/mall
- ❑ Bank
- ❑ Coffee shop/ restaurant
- ❑ Transit stop
- ❑ School
- ❑ Other _____

(***If the response is one of the above, probe to determine whether original location is home, work, or hotel and Check appropriate box above***)

- ❑ **HOME**
- ❑ **WORKPLACE**
- ❑ **HOTEL**
- ❑ **DON'T KNOW**

9. **Where are you heading to right now?**

- ❑ Business meeting
- ❑ Parking lot
- ❑ Retail store/mall
- ❑ Bank
- ❑ Coffee shop/ restaurant
- ❑ Transit stop
- ❑ School
- ❑ Other _____

(***If the response is one of the above, probe to determine whether original location is home, work, or hotel and Check appropriate box above***)

- ❑ **HOME**
- ❑ **WORKPLACE**
- ❑ **HOTEL**
- ❑ **DON'T KNOW**

10. **Do you use the +15 system to make the trip you are making right now on a regular basis, say 1 or more times per week?**

- ❑ Yes
- ❑ No
- ❑ Don't know
- ❑ Other _____

11. **What other trips do you make on the +15 system? (*****May use map to clarify if needed*****)**

_____

_____

_____

❑ None

12. **I am going to name a few +15 locations. Could you please indicate whether or not you have USED +15'S in the general area of these locations. (**_Read Locations_**)**

(a) **Calgary Tower**	❑ YES	❑ NO	❑ DK
(b) **Calgary Public Library**	❑ YES	❑ NO	❑ DK
(c) **Bankers Hall**	❑ YES	❑ NO	❑ DK
(d) **Bow Valley Square**	❑ YES	❑ NO	❑ DK
(e) **Shell Centre**	❑ YES	❑ NO	❑ DK
(f) **Fifth and Fifth**	❑ YES	❑ NO	❑ DK
(g) **Western Canadian Place**	❑ YES	❑ NO	❑ DK

(Section 2 – Wayfinding)

13. **Overall, is it easy to find your way through the +15 system?**

❑ Yes ❑ Don't know
❑ No ❑ Other _____

14. **Do you ever feel disoriented or lost when using the +15 system?**

❑ Yes ❑ Don't know
❑ No (**_Go to # 18_**) ❑ Other _____

15. **(**_IF YES_**) Why do you think you feel lost or disoriented?**

❑ Unfamiliarity ❑ Unclear maps
❑ Poor signage ❑ Can't see outside
❑ Confusing system ❑ Other _____

16. **(**_IF YES_**) Can you explain where you tend to feel disoriented or lost?**

❑ Access/exit points ❑ Specific Section (**_Description_**)
❑ Bridges _____
❑ Hallways _____
❑ Building lobbies
❑ Plazas ❑ Other _____
❑ Unfamiliar parts

17. (**_IF YES_**) **How frequently do you feel lost or disoriented in the system?**

- ❑ Always
- ❑ Frequently
- ❑ Occasionally
- ❑ Rarely
- ❑ Don't know
- ❑ Other _____

18. **Can you give examples of any physical features that help you locate yourself or find your way while using the +15 system?**

(**_Prompt: Such as gardens, sculptures, artwork, displays_**)

- ❑ No
- ❑ Yes

(**_Description_**)

_____

_____

- ❑ Don't know
- ❑ Other _____

19. **Is it easier to find your way through the +15 system when you can see the buildings or streets outside?**

- ❑ Yes
- ❑ No
- ❑ Don't know
- ❑ Other _____

20. **Do you think that the existing +15 signs are useful in helping you find your way through the system?**

- ❑ Yes
- ❑ No
- ❑ Don't know
- ❑ Other _____

21. **Are some types of signage more helpful than other types?**

- ❑ Yes
- ❑ No (**_Go To 23_**)
- ❑ Don't know
- ❑ Other _____

22. (**_IF YES_**) **What type?**

- ❑ Blue circles
- ❑ Kiosk signs
- ❑ Building name signs
- ❑ Maps
- ❑ Other _____

23. How easy or difficult is it to understand the existing signs?

- ❑ Very easy
- ❑ Satisfactory
- ❑ Hard to understand
- ❑ No opinion
- ❑ Other _____

24. Are there enough signs to help you find your way on the +15 system?

- ❑ Yes
- ❑ No
- ❑ Don't know
- ❑ Other

25. Do you ever refer to the map pedestals provided on the +15 system?

- ❑ Yes
- ❑ No
- ❑ Don't know
- ❑ Other _____

26. **(**_IF YES_**) What is your opinion of them?**

OR

(_IF NO_**) Why Not?**

❑ No Opinion

Positive	Negative
❑ Clear/understandable	❑ Unclear/confusing
❑ Easy to locate	❑ Out of date
❑ Helpful	❑ Hard to locate
❑ Show whole system	❑ Too few
	❑ Not helpful
❑ Other _____	❑ Cover too much of system
	Other _____

27. Have you tried to access the +15 system directly from the street?

- ❑ Yes
- ❑ No
- ❑ Don't know
- ❑ Other _____

28. How did you access the +15 system today? Did you access from ...
(_READ CHOICES_**)**

- ❑ Street
- ❑ Parkade
- ❑ Transit stop
- ❑ Building elevator
- ❑ Escalator
- ❑ Office building
- ❑ Don't know
- ❑ Other _____

29. **How do you feel about the existing +15 access stairs, escalators, or elevators?**

Positive	Negative
❑ They are fine ❑ Convenient ❑ Easy to find ❑ Clean ❑ Secure/safe	❑ Unsafe ❑ Dark ❑ Hard to Find ❑ Isolated ❑ Smelly ❑ Dirty
Other:_____ ❑ Don't	Other: _____ Know

30. **What would you look for if you were on the street and looking for a +15 access?**

- ❑ Bridges
- ❑ Signs
- ❑ Stairs, escalators, elevators
- ❑ Entrances through buildings
- ❑ Know where entrances are
- ❑ Don't use street access
- ❑ Don't know
- ❑ Other _____

_____

(Section 3 – Safety)

31. **Are there times of the day or week that you do not use the +15 system?**

- ❑ Yes
- ❑ No (** *Go to #34* **)
- ❑ Don't know
- ❑ Other _____

32. (** *If YES* **) **When?**

- ❑ Night
- ❑ Day
- ❑ Weekend
- ❑ Other _____

33. **(**_If YES_**) Why don't you use the +15 at these times?**

- ❑ Not downtown
- ❑ Unsafe
- ❑ People sleeping
- ❑ Panhandling
- ❑ Intoxicated people
- ❑ Too isolated
- ❑ Retail outlets closed
- ❑ Offices/buildings closed
- ❑ Unsure of operating hours
- ❑ Too dark
- ❑ Other _____

34. **Are there any particular sections of the +15 system that you avoid using?**

- ❑ Yes
- ❑ No (**_Go to # 37_**)
- ❑ Don't know
- ❑ Other _____

35. **(**_If YES_**) Where?**

_____

_____

36. **(**_If YES_**) Why?**

- ❑ No reason to go there
- ❑ Unsafe
- ❑ People sleeping
- ❑ Panhandling
- ❑ Intoxicated people
- ❑ Too isolated
- ❑ Poor maintenance
- ❑ Bad area of the city
- ❑ Other _____
- ❑ Don't know

(Section 4 – Design Features)

37. **Do you feel that there are parts of the downtown that are missing +15 bridges?**

- ❑ Yes
- ❑ No (**_Go To 39_**)
- ❑ Maybe
- ❑ Don't know
- ❑ Other _____

38. **(**_IF YES_**) Where?**

(Street and Avenue)_____

_____

39. Can you think of any areas, Streets, or Avenues where +15 bridges or hallways should NOT be built?

❑ Yes ***(Should not be built)*** _____

_____

❑ No

40. (_If YES_**) Why?**

_____

_____

_____

(Section 5 – General and Aesthetic Issues)

41. Are there any improvements you would like to see made on the existing +15 system? (_Check all that apply_**)**

❑ Yes
❑ No
❑ Maybe
❑ Don't know

42. (_IF YES_**) What improvements?**

❑ Signage
❑ Clearer directions
❑ Better maps
❑ More artwork, sculptures or displays
❑ More security
❑ Clearly marked access/exits
❑ More retail activity (including buskers)
❑ Better lighting
❑ Posted hours of operation
❑ Less vandalism/graffiti
❑ Fewer social problems (intoxicated users/panhandling etc.)
❑ Other _____

43. Do you use any of the atriums, seating spaces, or outdoor gardens located throughout the +15 system?

❑ Yes
❑ No (**_Skip to #48_**)
❑ Don't know
❑ Other _____

44. **(**IF YES**) How often?**

- ❑ Daily
- ❑ Several times a week
- ❑ Once a week
- ❑ Once every coupie weeks
- ❑ Once a month
- ❑ Once every few months
- ❑ Several times per year
- ❑ Once a year
- ❑ Less than once a year
- ❑ Don't know
- ❑ Other _____

45. **(**IF YES**) Which ones?**

_____

_____

_____

46. **(**IF YES**) For what purpose?**

- ❑ Smoke breaks
- ❑ Coffee breaks
- ❑ To eat
- ❑ For recreation (walking etc)
- ❑ To people watch
- ❑ Socialize
- ❑ Other _____

47. **(**IF YES**) What do you like about them?**

- ❑ Vegetation
- ❑ Fresh air
- ❑ Relaxing
- ❑ Can smoke there
- ❑ Social place
- ❑ Clean
- ❑ Safe
- ❑ Ponds/fountains
- ❑ Quiet
- ❑ Don't know
- ❑ Other _____

48. **What, if anything, do you NOT like about the atriums, seating spaces, or outdoor gardens?**

- ❑ Crowded
- ❑ Isolated
- ❑ Hard to find
- ❑ Panhandlers
- ❑ Unclean
- ❑ Smokers
- ❑ Non-smokers
- ❑ People sleeping
- ❑ People loitering
- ❑ Vandalism/graffiti
- ❑ Intoxicated people
- ❑ Other _____
- ❑ N/A (Like everything)

49. **Do you generally like the way +15 bridges look from the street?**

- ❑ Yes
- ❑ No
- ❑ Mixed
- ❑ Don't know
- ❑ Other _____

50. **Would you say that +15 bridges have a positive or negative VISUAL impact on the way the Downtown looks?**

- ❑ Positive
- ❑ Negative
- ❑ Mixed
- ❑ Don't know
- ❑ Other _____

(Section 6 – Personal Information)

Now I am going to ask you for some personal information.

51. **Do you live in Calgary?**

- ❑ Yes
- ❑ No (***Go to #54***)

52. **(**IF YES**) Do you live in the Downtown?**

- ❑ Yes
- ❑ No

53. **(**IF YES**) May I ask for your home postal code? _____**

54. **(**IF NO**) Where are you from? _____**

55. Do you work in the Downtown?

- ❑ Yes
- ❑ No

56. How long have you been in Calgary?

Residents	Visitors
❑ Under 1 year	❑ Under 1 day
❑ 1-3 years	❑ 1-3 days
❑ 4-6 years	❑ 4-6 days
❑ 7-9 years	❑ 7-9 days
❑ 10 years or more	❑ 10 days or more

57. Please indicate your age category? (Let them fill out**)**

- ❑ **#1** (Under 18 years)
- ❑ **#2** (18-29 years)
- ❑ **#3** (30-39 years)
- ❑ **#4** (40-49 years)
- ❑ **#5** (50-59 years)
- ❑ **#6** (60 years and over)
- ❑ **#7** (Not applicable)

58. (DO NOT ASK interviewer, indicate gender**)**

- ❑ Male
- ❑ Female

Thank you for your time and cooperation

INTERVIEWER NOTES:

Appendix B:
FREQUENCY TABLES

Appendix B: Frequencies and Percentages

NOTE: Respondents were able to give more than one response per question. The frequencies represented here are the number of respondents who gave a particular response. The percentages are the percent of all respondents who gave a particular answer. For some of the contingency questions the percentages are the N value of the percentage is the number of respondents who answered the question. In many cases, the frequencies will exceed the total number of respondents or 100%. For this reason, totals and cumulative frequencies have been ommitted.

The (*) symbol represents answers that were not on the survey form but were added during the analysis of "other" responses.

Survey Location:

Location	Frequency	Percent of Respondents (N=181)
Bankers Hall	32	17.68
Energy Plaza	25	13.81
Petro Canada	21	11.60
Standard Life	21	11.60
Bow Valley Square	19	10.50
TD Square	17	9.39
Nova	13	7.18
Penny Lane	10	5.52
Public Library	5	2.76
Alberta Stock Exchange	4	2.21
Sunlife	4	2.21
Petroleum Club	4	2.21
Eatons	3	1.66
Calgary Tower	2	1.10
Western Canadian Place	1	0.55
Total Responses	181	100

Date:

	Frequency	Percent of Respondents (N=181)
Tuesday July 14	62	34.25
Thursday July 16	80	44.20
Friday July 17	16	8.84
Saturday July 18	23	12.71
Total Responses	181	100

Weather Conditions

Weather	Frequency	Percent of Respondents (N=181)
Sunny	173	95.58%
Cloudy	8	4.42%
Raining	0	0%
Total Responses	**181**	**100**

Outdoor Temperature:

Temperature	Frequency	Percent of Respondents (N=181)
Hot (>25C)	73	40.33%
Mild (10-25C)	108	59.67%
Cold (<10C)	0	0%
Total Responses	**181**	**100**

1. About how many days a week do you use the +15 system in the summer?

# Of Days	Frequency	Percent of Respondents (N=181)
Never	3	1.66
Occasionally	20	11.05
1-2 Days	34	18.78
3-4 Days	33	18.23
5-6 Days	55	30.39
Every Day	28	15.47
Don't Know	2	1.10
Other	3	1.66
*When Raining	5	2.76

2. How many days a week in the winter?

# Of Days	Frequency	Percent of Respondents (N=181)
Never	5	2.76
Occasionally	9	4.97
1-2 Days	13	7.18
3-4 Days	24	13.26
5-6 Days	70	38.67
Every Day	54	29.83
Don't Know	4	2.21
Other	3	1.66

3. Generally speaking, what is the main reason you use the +15 system?

Reason	Frequency	Percent of Respondents (N=181)
Weather Protection	70	38.67
Pedestrian/Vehicle Separation	29	16.02
Easier to Cross Street	23	12.71
Convenience	81	44.75
Quiet	5	2.76
Safe	0	0
Shopping/Restaurants	24	13.26
For Work	34	18.78
Open Spaces/Gardens	0	0
Don't Know	0	0
Other	13	7.18

4. Why are you using the +15 system today?

Reason	Frequency	Percent of Respondents (N=181)
Weather Protection	8	4.42
Pedestrian/Vehicle Separation	9	4.97
Easier to Cross Street	13	7.18
Convenience	70	38.67
Quiet	3	1.66
Safe	0	0
Shopping/Restaurants	50	27.62
For Work	41	22.65
Open Spaces/Gardens	1	0.55
Don't Know	1	0.55
Other	21	11.60

5. Do you prefer using the +15 system over using the sidewalk?

Response	Frequency	Percent of Respondents (N=181)
Yes	86	47.51
No	30	16.57
Depends on Weather	46	25.41
Depends on Where I am	17	9.39
Don't Know	3	1.66
Other	9	4.97

6. What, if anything, DON'T you like about using the +15 system?

Don't Like	Frequency	Percent of Respondents (N=181)
Confusing System	17	9.39
Inconvenient	17	9.39
Gaps in the System	38	20.99
Access/Exit Points	3	1.66
Dead Ends	4	2.21
Closure Times	17	9.39
Unsafe	1	0.55
Graffiti/Vandalism	0	0
People Loitering	1	0.55
People Sleeping	0	0
Intoxicated People	1	0.55
Panhandling	1	0.55
Not Enough Retail/Service	0	0
Other	19	10.50
N/A Like Everything	53	29.28
*Doors	16	8.84
*Climate	19	10.50
*Crowded	8	4.42

7. How did you travel downtown today?

Mode of Travel	Frequency	Percent of Respondents (N=181)
Private Car	90	49.72
Taxi	0	0
Bus	25	13.81
C-Train	42	23.20
Bicycle	7	3.87
Walked	23	12.71
Other	0	0

8. Where are you coming from?

Origin Point (Primary in Capitals)	Frequency	Percent of Respondents (N=181)
Meeting	6	3.31
Parking Lot	0	0
Retail Store/Mall	16	8.84
Bank	9	4.97
Coffee Shop/Restaurant	13	7.18
Transit Stop	0	0
School	1	0.55
Other	14	7.73
HOME	40	22.10
WORKPLACE	122	67.40
HOTEL	3	1.66
DON'T KNOW	1	0.55

9. Where are you heading to right now?

Origin Point (Primary in Capitals)	Frequency	Percent of Respondents (N=181)
Meeting	6	3.31
Parking Lot	1	0.55
Retail Store/Mall	11	6.08
Bank	3	1.66
Coffee Shop/Restaurant	15	8.29
Transit Stop	0	0
School	0	0
Other	11	6.08
HOME	26	14.36
WORKPLACE	132	72.93
HOTEL	2	1.10
DON'T KNOW	1	0.55

10. Do you use the +15 system to make the trip you are making right now on a regular basis, say 1 or more times per week?

Response	Frequency	Percent of Respondents (N=181)
Yes	143	79.01
No	35	19.34
Don't Know	0	0
Other	3	1.66

11. What other trips do you make on the +15 system? (_May use map to clarify if needed_**)**

Response	Frequency	Percent of Respondents (N=181)
Work/Offices	45	24.86
Stores/Services	55	30.39
Lunch/Coffee breaks	29	16.02
Home	4	2.21
Parking lots	5	2.76
Transit	6	3.31
Other	37	20.44

12. I am going to name a few +15 locations. Could you please indicate whether or not you have USED +15'S in the general area of these locations. (_Read Locations_**)**

Response	Frequency	Percent of Respondents (N=181)
Calgary Tower		
Yes	83	45.86
No	98	54.14
Don't Know	0	0
Total	181	100
Calgary Public Library		
Yes	55	30.39
No	124	68.51
Don't Know	2	1.10
Total	181	100
Bankers Hall		
Yes	169	93.37
No	12	6.63
Don't Know	0	0
Total	181	
Bow Valley Square		
Yes	153	84.53
No	27	14.92
Don't Know	1	0.55
Total	181	100
Shell Centre		
Yes	101	55.80
No	79	43.65
Don't Know	1	0.55
Total	181	100
Fifth and Fifth		
Yes	119	65.75
No	59	32.60
Don't Know	3	1.66
Total	181	100

(CONT'D)

Western Canadian Place		
Yes	91	50.28
No	85	46.96
Don't Know	5	2.76
Total	181	100

13. Overall, is it easy to find your way through the +15 system?

Response	Frequency	Percent of Respondents (N=181)
Yes	147	81.22
No	23	12.71
Don't Know	0	0
Other	3	1.66
*If Familiar	8	4.42

14. Do you ever feel disoriented or lost when using the +15 system?

Response	Frequency	Percent of Respondents (N=181)
Yes	74	40.88
No	105	58.01
Don't Know	3	1.66
Other	2	1.10

15. (IF YES**) Why do you think you feel lost or disoriented?**

Response	Frequency	Percent of Respondents (N=74)
Unfamiliarity	41	55.40
Poor Signage	25	33.78
Confusing System	25	33.78
Unclear Maps	5	6.76
Can't See Outside	3	9.56
Other	15	20.28

16. (**IF YES**) Can you explain where you tend to feel disoriented or lost?

Response	Frequency	Percent of Respondents (N=74)
Access/Exit Points	5	6.76
Bridges	1	1.35
Hallways	15	20.27
Building Lobbies	25	33.78
Plazas	3	4.05
Unfamiliar Parts	13	17.57
Specific Section	30	40.54
Other	11	14.86

17. (**IF YES**) How frequently do you feel lost or disoriented in the system?

Response	Frequency	Percent of Respondents (N=74)
Always	4	5.41
Frequently	2	2.70
Occasionally	27	36.49
Rarely	37	50
Don't Know	0	0
Other	0	4.05

18. Can you give examples of any physical features that help you locate yourself or find your way while using the +15 system?

*(**Prompt: Such as gardens, sculptures, artwork, displays**)*

Response	Frequency	Percent of Respondents (N=181)
No	39	21.55
Yes	137	75.69
*Statues/Artwork/Display	6	3.31
*Stores/Coffee Shops	14	7.73
*Signs	45	24.86
*Maps	28	15.47
*Windows/Outside	38	20.99
*Streets	14	7.73
*Buildings	19	10.50
*Landmarks	10	5.52
*Bridges	3	1.66
*Open Spaces	1	0.55
*Other	3	1.66
Don't know	2	1.10
Other	3	1.66

19. Is it easier to find your way through the +15 system when you can see the buildings or streets outside?

Response	Frequency	Percent of Respondents (N=181)
Yes	158	87.29
No	18	9.94
Don't Know	3	1.66
Other	1	0.55

20. Do you think that the existing +15 signs are useful in helping you find your way through the system?

Response	Frequency	Percent of Respondents (N=181)
Yes	130	71.82
No	27	14.92
Don't Know	5	2.76
Other	10	5.52
*Don't Use/Need	9	4.97

21. Are some types of signage more helpful than other types?

Response	Frequency	Percent of Respondents (N=181)
Yes	96	53.04
No	49	27.07
Don't Know	27	14.92
Other	0	0

22. (**IF YES**) What type?

Response	Frequency	Percent of Respondents (N=96)
Blue Circles	19	19.79
Kiosk Signs	1	1.04
Building Name Signs	38	39.58
Maps	24	25
Other	11	11.46
*Directional Signs	15	15.63
*Street Names	11	11.46

23. How easy or difficult is it to understand the existing signs?

Response	Frequency	Percent of Respondents (N=181)
Very Easy	89	49.17
Satisfactory	55	30.39
Hard to Understand	18	9.94
No Opinion	9	4.97
Other	5	2.76

24. Are there enough signs to help you find your way on the +15 system?

Response	Frequency	Percent of Respondents (N=181)
Yes	108	59.67
No	60	33.15
Don't Know	11	6.08
Other	2	1.10

25. Do you ever refer to the map pedestals provided on the +15 system?

Response	Frequency	Percent of Respondents (N=181)
Yes	102	56.35
No	77	42.54
Don't Know	1	0.55
Other	1	0.55

26. (IF YES**) What is your opinion of them?**

OR

(IF NO**) Why Not?**

Response	Frequency	Percent of Respondents (N=181)
No Opinion	**43**	**23.76**
Positive	**95**	**52.49**
Clear/Understandable	55	30.39
Easy to Locate	9	4.97
Helpful	26	14.36
Show Whole System	3	1.66
Other Positive	2	1.10
Negative	**67**	**37.02**
Unclear/Confusing	30	16.57
Out of Date	4	2.21
Hard to Locate	10	5.52
Too Few	3	1.66
Not Helpful	12	6.63
Cover too Much of System	4	2.21
Other Negative	4	2.21
***Don't Use**	**14**	**7.73**

27. Have you tried to access the +15 system directly from the street?

Response	Frequency	Percent of Respondents (N=181)
Yes	134	74.03
No	5	24.86
Don't Know	0	0
Other	1	0.55

28. How did you access the +15 system today? Did you access from ... (*READ CHOICES*** **)**

Response	Frequency	Percent of Respondents (N=181)
Street	27	14.92
Parkade	13	7.18
Transit Stop	2	1.10
Building Elevator	10	5.52
Escalator	16	8.84
Office Building	118	65.19
Don't Know	0	0
Other	1	0.55

29. How do you feel about the existing +15 access stairs, escalators, or elevators?

Response		Frequency	Percent of Respondents (N=181)
Positive		**159**	**87.85**
	They Are Fine	144	79.56
	Convenient	2	1.10
	Easy to Find	4	2.21
	Clean	0	0
	Safe/Secure	2	1.10
	Other Positive	5	2.76
		2	1.10
Negative		**47**	**25.97**
	Unsafe	13	7.18
	Dark	2	1.10
	Hard to Find	2	1.10
	Isolated	3	1.66
	Smelly	2	1.10
	Dirty	19	10.5
	Other Negative	6	3.31

30. What would you look for if you were on the street and looking for a +15 access?

Response	Frequency	Percent of Respondents (N=181)
Bridges	35	19.34
Signs	125	69.06
Stairs/Escalators/Elevators	21	11.60
Entrances Through Buildings	25	13.81
Know Where Entrances Are	4	2.21
Don't Use Street Access	1	0.55
Don't Know	6	3.31
Other	4	2.21

31. Are there times of the day or week that you do not use the +15 system?

Response	Frequency	Percent of Respondents (N=181)
Yes	135	74.59
No	41	22.65
Don't Know	3	1.66
Other	1	0.55

32. (_If YES_**) When?**

Response	Frequency	Percent of Respondents (N=135)
Night	52	38.52
Day	2	1.48
Weekend	89	65.93
Other	15	11.11
Nice Weather	13	9.63

33. (_If YES_**) Why don't you use the +15 at these times?**

Response	Frequency	Percent of Respondents (N=135)
Not Downtown	88	65.19
Unsafe	7	5.19
People Sleeping	1	0.74
Panhandling	1	0.74
Intoxicated People	0	0
Too Isolated	2	1.48
Retail Outlets Closed	6	4.44
Offices/Buildings Closed	10	7.41
Operating Hours	18	13.33
Too Dark	0	0
Other	18	13.33
*Nice Weather	11	8.15

34. Are there any particular sections of the +15 system that you avoid using?

Response	Frequency	Percent of Respondents (N=181)
Yes	24	13.26
No	156	86.19
Don't Know	1	0.55
Other	0	0

35. (_If YES_**) Where?**

Response	Frequency	Percent of Respondents (N=24)
Parkades	5	20.83
Stairs	5	20.83
Dark Areas	3	12.50
Certain Buildings	4	16.67
Non-Glass Areas	1	4.17
Other	6	25.00

36. (**If YES**) Why?

Response	Frequency	Percent of Respondents (N=24)
No Reason to Go There	0	0
Unsafe	9	37.50
People Sleeping	3	12.50
Panhandling	2	8.33
Intoxicated People	2	8.33
Too Isolated	5	20.83
Poor Maintenance	4	16.67
Bad Area of City	1	4.17
Other	10	41.67
Don't Know	0	0
Confusing	8	33.33

37. Do you feel that there are parts of the downtown that are missing +15 bridges?

Response	Frequency	Percent of Respondents (N=181)
Yes	120	66.30
No	41	22.65
Maybe	7	3.87
Don't Know	12	6.63
Other	0	0

38. (**IF YES**) Where?

Response (Over 3 Respondents)	Frequency	Percent of Respondents (N=181)
Bow Valley Square	31	25.83
City Hall	7	5.83
The Bay	18	15.00
Petro Canada	13	10.83
Telus	8	6.67
Energy Plaza	8	6.67
TD Square	11	9.17
Eau Claire	7	5.83
Eatons	5	4.17
Convention Centre	4	3.33
Amoco	3	2.50
Sunlife	3	2.50
Monenco	5	4.17
Calgary Tower	3	2.50
Over 7th Avenue	12	10.00
Over 6th Avenue	9	7.50
West Downtown	16	13.33
East Downtown	7	5.83
All Over	11	9.17
Others (Less than 3 Responses)	35	29.17

39. Can you think of any areas, Streets, or Avenues where +15 bridges or hallways should NOT be built?

Response	Frequency	Percent of Respondents (N=181)	
Yes	**21**		**11.60**
		(N= 21)	**(N=181)**
Only Downtown	4	19.05	2.21
High Crime Areas	2	9.52	1.10
Stephen Avenue	4	19.05	2.21
Old City Hall	1	4.76	0.55
Theatros	1	4.76	0.55
Parks	1	4.76	0.55
By the Bow River	1	4.76	0.55
Eau Claire	1	4.76	0.55
No	**158**		**87.29**

40. (If YES**) Why?**

Response	Frequency	Percent of Respondents (N=21)
Preserve Views/Vistas	2	9.52
Preserve Historical Buildings	2	9.52
Safety Concerns	2	9.52
Preserve Natural Sunlight	2	9.52
Ugly	1	4.76
Other	12	57.14

41. Are there any improvements you would like to see made on the existing +15 system? (Check all that apply**)**

Response	Frequency	Percent of Respondents (N=181)
Yes	95	52.49
No	78	43.09
Maybe	3	1.66
Other	3	1.66

42. (IF YES**) What improvements?**

Response	Frequency	Percent of Respondents (N=95)
Signage	25	26.32
Clearer Directions	23	24.21
Better Maps	20	21.05
More Art/Sculptures/Displays	0	0
More Security	3	3.16
Clearly Marked Access/Exits	9	9.47
More Retail Activity	2	2.11
Better Lighting	4	4.21
Hours of Operation	15	15.79
Less Vandalism/Graffiti	0	0
Fewer Social Problems	5	5.26
Other	18	18.95
*More Bridges	20	21.05
*Climate Control	14	14.74
*Doors	14	14.74

43. Do you use any of the atriums, seating spaces, or outdoor gardens located throughout the +15 system?

Response	Frequency	Percent of Respondents (N=181)
Yes	105	58.01
No	75	41.44
Don't Know	0	0
Other	1	0.55

44. (IF YES**) How often?**

Response	Frequency	Percent of Respondents (N=105)
Daily	10	9.52
Several Times a Week	19	18.10
Once a Week	19	18.10
Once Every Couple Months	7	6.67
Once a Month	17	16.19
Once Every Few Months	14	13.33
Several Times per Year	6	5.71
Once a Year	1	0.95
Less than Once a Year	0	0
Don't Know	0	0
Other	12	11.43

45. (IF YES**) Which ones?**

Response (Less than 3 responses)	Frequency	Percent of Respondents (N=105)
James Short Park	3	2.86
Bow Valley Square	11	10.48
Devonian Gardens	51	48.57
Petro Canada	6	5.71
Standard Life	9	8.57
TD Square	6	5.71
Bankers Hall	4	3.81
Energy Plaza	3	2.86
Other (Less Than 3 Responses)	30	28.57

46. (**IF YES**) For what purpose?

Response	Frequency	Percent of Respondents (N=105)
Smoke Break	12	11.43
Coffee Breaks	15	14.29
To Eat	59	56.19
For Recreation	9	8.57
To People Watch	4	3.81
Socialize	14	13.33
Other	20	19.05
Rest/Relax	17	16.19

47. (**IF YES**) What do you like about them?

Response	Frequency	Percent of Respondents (N=105)
Vegetation	28	26.67
Fresh Air	33	31.43
Relaxing	30	28.57
Can Smoke There	7	6.67
Social Place	9	8.57
Clean	3	2.86
Safe	4	3.81
Ponds/Fountains	7	6.67
Quiet	16	15.24
Don't Know	0	0
Other	19	18.10
*Convenient	16	15.24
*Climate	13	12.38

48. What, if anything, do you NOT like about the atriums, seating spaces, or outdoor gardens?

Response	Frequency	Percent of Respondents (N=181)
Crowded	24	13.26
Isolated	1	0.55
Hard to Find	0	0
Panhandlers	1	0.55
Unclean	4	2.21
Smokers	11	6.08
Non-Smokers	0	0
People Sleeping	4	2.21
People Loitering	5	2.76
Vandalism/Graffiti	2	1.10
Intoxicated People	3	1.66
Other	13	7.18
N/A Like Everything	81	44.75
*Don't Use	34	18.78

49. Do you generally like the way +15 bridges look from the street?

Response	Frequency	Percent of Respondents (N=181)
Yes	166	91.71
No	3	1.66
Mixed	9	4.97
Don't Know	1	0.55
Other	2	1.10

50. Would you say that +15 bridges have a positive or negative VISUAL impact on the way the Downtown looks?

Response	Frequency	Percent of Respondents (N=181)
Positive	110	60.77
Negative	6	3.31
Mixed	14	7.73
Don't Know	2	1.10
Other	4	2.21
*No Impact	46	25.41

51. Do you live in Calgary?

Response	Frequency	Percent of Respondents (N=181)
Yes	159	87.85
No	21	11.6
Total Responses	181	100

52. (IF YES**) Do you live in the Downtown?**

Response	Frequency	Percent of Respondents (N=164)
Yes	24	14.63
No	140	85.36
Total Responses	164	100

53. (IF YES**) May I ask for your home postal code? _____**

T2E 8KA	T2K	T2P4K2	T3A4G7	T2K5T5	T2S1J9	T2R0R1
T2W 3M1	T2W0Z9	T2Y2G3	T2V0N2	T2W4V6	T3A2E6	T3C0R6
T3G 2Z9	T3C	T2E4Y1	T2T1E4	T2E1C6	T3C2N5	T3C3C4
T2V	T3Z2L9	T2V2H9	T2V1R3	T2V4P7	NA	T2J2H8
T3B 4N5	T1Y1K5	T3E7E4	T2E6H3	T2N4C5	T2L0T6	T2Y2N4
T1Y 6P6	T3G 4E6	T2G3B3	T2A 1H1	T2X1A8	T3J1Y6	T2W4A3
T36 3M9	T2P0J8	T2R0L7	T2Y1W3	T2A5E7	T2N1T5	T2R0K3
T2J 2S8	T2J1Z8	T2S2G3	T2T1E3	T2W2V8	T3K4B5	T3H3W5
T2P 4L2	T2M2V9	T3A1P5	T2V4Y8	T2S0K8	T2M0Y5	T2W5Y5
T2P 2A6	T2A2S7	T3H1K8	T2H2K5	T3A4Z3	T3E2B2	T2W2E7
T2M 2A5	T2N3R9	T2G5J7	T3B1E5	T3K3P9	T3A1Z4	T2T2N2
T2E 0J4	T3A3X7	T2M2K3	T2R0R5	T3E6V1	T3G2O9	T2L0B6
T3E	T2A4B3	T2A7J4	T2T2X1	T2P0G8	T2N2M4	T2T0S8
T2R 0H9	T2A0Z6	T2W3C8	T1Y4H4	T2J4Y9	INC	T2R0S8
T2J 5J4	T2K1C1	T2P2B3	T1Y5G9	T1Y4G8	T2R0C3	T3H1B6
T36 2G4	T2K	T3G2X2	T3A2M4	T2W1R2	T3C1H1	T3G4H2
T3K 1X6	T2C1N9	T3B4M2	T3G3Z5	T2B0P3	T3A5W4	T1Y3Z4
T2P 0N8	T2Z2H1	T2R1L6	T2P3P3	T2N2B3	T2E6M1	
T3A 5N7	T2G4Z8	T2A4W5	T2E5R6	T2M1P8	T2Y1A4	
T3H 2S7	T3E6C8	T2J6P6	T3B4L1	T2W4K4	T2K5Y6	
T3A1Z4	T2T1C7	T2Y3H8	T2K4K1	T2W4T8	T2K4G4	
T2K 3R2	T2C4H1	T3C4T9	T2N1N1	T3J1C3	T3G3X8	
T2K8Z6	T3H1S2	T2E4K5	T3K4H8	T3A5J2	T3G4H6	

54. (**IF NO**) **Where are you from?** _____

Response	Frequency	Percent of Respondents (N=21)
Sundrie	1	
Bragg Creek	3	
Strathmore	2	
Canmore	2	
Airdrie	4	
Altadore	1	
Okotoks	1	
Medicine Hat	1	
Chestermere	1	
DeWinton	1	
Cochrane	1	
Holland	1	
British Columbia	1	
Missoula Montana	1	
Total Responses	21	

55. Do you work in the Downtown?

Response	Frequency	Percent of Respondents (N=181)
Yes	151	83.43
No	18	9.94
Used To/Retired	11	6.08
Total Responses	181	

56. How long have you been in Calgary?

Response		Frequency	Percent of Respondents (N=181)
Residents			
	Under 1 Year	9	4.97
	1-3 Years	18	9.94
	4-6 Years	23	12.71
	7-9 Years	14	7.73
	10 Years or More	112	61.88
Visitors			
	Under 1 Day	0	0
	1-3 Days	3	1.66
	4-6 Days	0	0
	7-9 Days	0	0
	10 Days or More	0	0
Total Responses		181	100

57. Please indicate your age category? (**Let them fill out**)

Response	Frequency	Percent of Respondents (N=181)
Under 18 Years	3	1.66
18-29 Years	40	22.10
30-39 Years	62	34.25
40-49 Years	45	24.86
50-59 Years	3	1.66
60 Years and Over	11	6.08
Not Applicable	0	0
Total Responses	181	100

58. Gender

Response	Frequency	Percent of Respondents (N=181)
Male	102	56.35
Female	79	43.65
Total Responses	181	100